



The *Movement* Disorder Society



FINAL PROGRAM

17TH INTERNATIONAL CONGRESS OF PARKINSON'S DISEASE
AND MOVEMENT DISORDERS

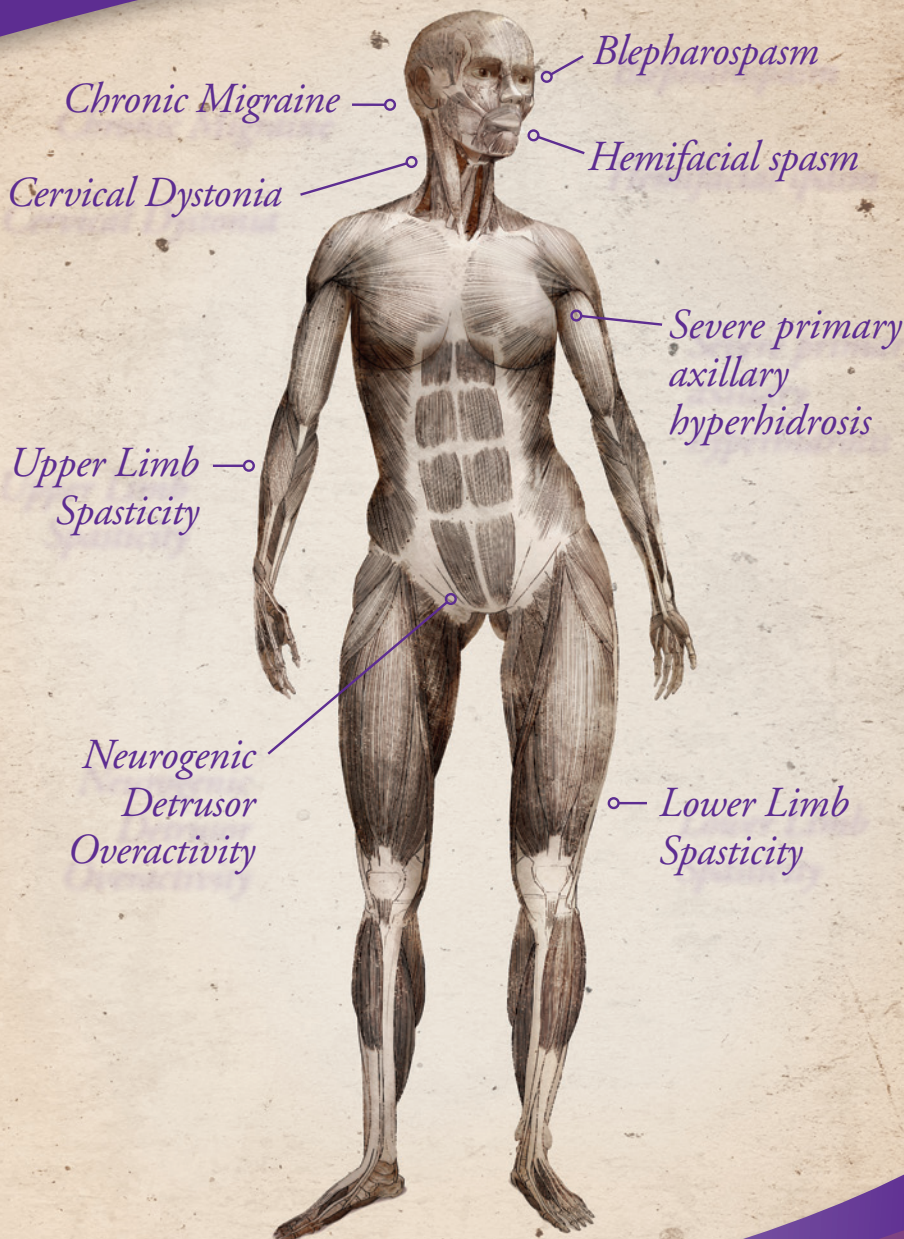
SYDNEY,
AUSTRALIA
JUNE 16-20, 2013



Australian Minimum Product Information - BOTOX® (botulinum toxin type A) purified neurotoxin complex is a prescription medicine containing 100 units (U) of botulinum toxin type A for injection. Indications: *Urinary incontinence due to neurogenic detrusor overactivity resulting from a defined neurological illness (such as spinal cord injury or multiple sclerosis) and not controlled adequately by anticholinergic agents. This does not include idiopathic overactive bladder; prophylaxis of headaches in adults with chronic migraine (headaches on at least 15 days per month of which at least 8 days are with migraine); strabismus; blepharospasm associated with dystonia, including benign blepharospasm & Vllth nerve disorders (hemifacial spasm) in patients 12 years & over; cervical dystonia (spasmodic torticollis); focal spasticity of the upper & lower limbs, including dynamic equinus foot deformity due to spasticity in juvenile cerebral palsy patients 2 years & older; severe primary hyperhidrosis of the axillae; focal spasticity in adults; spasmodic dysphonia; upper facial rhytides (glabellar lines, crow's feet and forehead lines) in adults. **Contraindications:** *Intradetrusor injection - acute urinary tract infection, acute urinary retention in patients who are not routinely catheterising, or who are not willing and/or able to initiate catheterisation post-treatment, if required; hypersensitivity to ingredients; myasthenia gravis or Eaton Lambert Syndrome; infection at injection site(s). **Precautions:** Different botulinum preparations are not therapeutically equivalent. Exercise extreme caution should substitution with another botulinum preparation be necessary. Botulinum toxin effects may be observed beyond site of local injection with symptoms consistent with mechanism of action and reported hours to weeks after injection. Symptoms may include muscular weakness, ptosis, diplopia, blurred vision, facial weakness, swallowing and speech disorders, constipation, aspiration pneumonia, difficulty breathing and respiratory depression. Risk of symptoms is greatest in children with spasticity, but can also occur in adults particularly those on high doses. Swallowing/ breathing difficulties can be life threatening and there have been reports of death (relationship to BOTOX® not established). *Serious adverse events including fatal outcomes have been reported in patients who had received BOTOX® injected directly into salivary glands, the oro-lingual-pharyngeal region, esophagus and stomach. Use with aminoglycosides or drugs that interfere with neuromuscular transmission; peripheral motor neuropathic diseases or neuromuscular junctional disorders; *hypersensitivity reactions such as anaphylaxis and serum sickness, as well as urticaria, soft tissue oedema and dyspnoea; inflammation at injection sites; excessive weakness in target muscle; pregnancy & lactation. Generalised weakness & myalgia may be related to systemic absorption. **Blepharospasm:** Reduced blinking following injection of the orbicularis muscle can lead to corneal pathology. Caution with patients at risk of angle closure glaucoma, including anatomically narrow angles. **Strabismus:** Inducing paralysis in extraocular muscles may produce spatial disorientation, double vision or past pointing. Use in chronic paralytic strabismus only in conjunction with surgical repair to reduce antagonist contracture. **Spasticity:** Not likely to be effective at a joint affected by a known fixed contracture. **Cervical Dystonia (spasmodic torticollis):** Possibility of dysphagia or dyspnoea. May be decreased by limiting dose injected into the sternocleidomastoid muscle to <100U. **Primary Hyperhidrosis of the Axillae:** Consider causes of secondary hyperhidrosis to avoid symptomatic treatment. **Spasmodic Dysphonia:** Laryngoscopy in diagnostic evaluation is mandatory. Avoid treatment in patients due to have elective surgery requiring general anaesthesia. **Chronic migraine:** Due to difficulties in establishing a diagnosis of chronic migraine, patients being considered for prophylaxis of headaches with BOTOX® should be evaluated by a neurologist or pain management specialist prior to receiving treatment with BOTOX®. ***Neurogenic Detrusor Overactivity:** The intradetrusor administration of BOTOX® is only to be conducted by a urologist/ urogynaecologist trained in this technique or by a urologist/urogynaecologist under the direct supervision of a urologist/urogynaecologist who has been so trained. *Caution when performing cystoscopy. *Assess post-void residual volume post-treatment. **Paediatric Use:** Safety & effectiveness below 18 years have not been established for urinary incontinence due to neurogenic detrusor overactivity, chronic migraine and below 12 years not established for blepharospasm, hemifacial spasm, cervical dystonia, hyperhidrosis, spasmodic dysphonia or upper facial rhytides. Safety & effectiveness below 2 years not established for focal spasticity. Caution should be exercised when treating patients with significant disability & co-morbidities and elderly. Caution should be exercised after treatment of BOTOX® as it can have an effect on the ability to drive and use machines. **Adverse Reactions:** Usually transient & occur within first week of injection. ≥1% Localised pain, tenderness, bruising, infection, local & general weakness, erythema, oedema, ptosis, irritation/tearing, vertical deviation, diplopia, sub-conjunctival & conjunctival haemorrhages, reversible increase in intra-ocular pressure, trigger finger, clumsiness, falling, hypokinesia, increased frequency of micturition, joint dislocation, muscle spasms, convulsions, nasopharyngitis, *dyspnea, pneumonia, *dry mouth, vomiting, contusion, leg pain/cramps, fever, knee pain, ankle pain, lethargy, arm pain, hypertonia, fever/flu syndrome, accidental injury, incoordination, paresthesia, asthenia, headache, hyperkinesia, neck pain, dysphagia, perceived increase in non-axillary sweating, vasodilation, paralytic dysphonia (breathy dysphonia), aspiration, stridor, technical failure, blepharoptosis, face pain, ecchymosis, skin tightness, nausea, temporary lateral lower eyelid droop, eyebrow ptosis, eyelid swelling, aching/itching forehead, feeling of tension, seizures, migraine, facial paresis, musculoskeletal stiffness, myalgia, musculoskeletal pain, muscle tightness, injection site pain, pruritus, *rash, *urinary tract infection, *urinary retention, *fatigue, *insomnia, *constipation, *muscular weakness, *gait disturbance, *bladder diverticulum, *haematuria, *dysuria, *autonomic dysreflexia. **Dose/ Administration:** Use one vial for one patient. Store reconstituted BOTOX® in refrigerator; use within 24 hours of reconstitution. ***Neurogenic Detrusor Overactivity:** 200 U injected in detrusor muscle. **Chronic migraine:** 155U to 195U administered intramuscularly (IM) divided across 7 specific head/neck muscle areas. **Blepharospasm:** Initially 1.25U to 2.5U injected into upper lid medial & lateral pre-tarsal orbicularis oculi & into lower lid lateral pre-tarsal orbicularis oculi. Cumulative dose over 2 months should not exceed 200U. **Strabismus:** Initial doses 1.25 – 2.5U to 2.5 – 5.0U per muscle. Maximum single injection for any one muscle is 25U. **Vllth Nerve Disorders (hemifacial spasm):** Dosing as for unilateral blepharospasm. Inject other facial muscles as needed. **Focal Spasticity in Children 2 Years & Older:** 0.5-2.0U/kg body weight for upper limb & 2.0-4.0U/kg body weight for lower limb. 4U/kg or 200U (the lesser amount) for equinus foot deformity. Other muscles range 3.0-8.0U/kg body weight & do not exceed 300U divided among muscles at any treatment session. **Focal Spasticity in Adults:** Individualise dosing. **Cervical Dystonia (spasmodic torticollis):** Individualise dosing. Maximum dose 360U every 2 months. **Primary Hyperhidrosis of the Axillae:** 50U intradermally to each axilla in 10-15 sites 1-2 cm apart. **Spasmodic Dysphonia:** Bilateral injections. Individualise dosing. **Glabellar Lines:** 2x4U in each corrugator muscle & 4U in the procerus muscle for 20U total dose. **Crow's Feet:** 2-6U/injection site, 3 sites bilaterally in lateral orbicularis oculi. **Forehead Lines:** 2-6U/injection site, 4 sites in frontalis muscle. Date of TGA approval: 20 March 2012

BOTOX®
Botulinum Toxin Type A

Mastering the art



BEFORE PRESCRIBING, PLEASE REVIEW APPROVED PRODUCT INFORMATION AVAILABLE UPON REQUEST FROM ALLERGAN.

PBS Information: Section 100 Restriction.
Refer to PBS for full information.

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*Please note change(s) in Product Information



Azilect[®]

rasagiline

– extend the now

PBS Information: Authority required (STREAMLINED). Parkinson's disease

Please review the Approved Product Information (PI) before prescribing.

Azilect[®] Australian abbreviated prescribing information (Rasagiline)

Indications: Symptomatic treatment of idiopathic Parkinson's disease, as monotherapy or adjunct therapy with a levodopa/decarboxylase inhibitor. **Dosage & Administration:** 1mg once daily with or without levodopa/decarboxylase inhibitor therapy. Tablets to be taken orally. **Contraindications:** hypersensitivity to rasagiline or tablet excipients, hepatic impairment, concomitant treatment with MAOIs, pethidine, tramadol, tapentadol, methadone, dextropropoxyphene, dextromethorphan, St John's wort and potent CYP1A2 inhibitors. **Precautions:** serotonin syndrome, hypertensive crisis, dietary tyramine, dyskinesia, postural hypotension, hallucinations, melanoma, skin examinations. **Interactions:** MAOIs, pethidine,

fluoxetine, fluvoxamine, serotonergic drugs, antidepressants, dextromethorphan, sympathomimetic drugs, levodopa, ciprofloxacin, potent CYP1A2 inhibitors, entacapone, alcohol, smoking, pregnancy (Category B3), lactation. **Adverse Events:** accidental injury, abdominal pain, pain, postural hypotension, hypotension, nausea, constipation, dry mouth, vomiting, dyspepsia, anorexia, weight loss, arthralgia, dyskinesia, dizziness, sleep disorder, somnolence, hallucinations, dystonia, abnormal dreams, dyspnoea, rash, falls, hypertensive crisis, rhabdomyolysis, inappropriate ADH secretion, headache, flu syndrome, fever, malaise, neck pain, arthritis, depression, paraesthesia, vertigo, pharyngitis, rhinitis, conjunctivitis. For all other adverse events see full PI. Date of TGA approval: 12 September 2011. Date of Minimum PI: 11 December 2012.

Product Information is available on request from Lundbeck Australia Pty Ltd.

For further information please consult the full PI.
<http://secure.healthlinks.net.au/content/lundbeck/pi.cfm?product=lupazilt>

Distributed and Marketed in Australia by:
Lundbeck Australia Pty Ltd 1 Innovation Rd
North Ryde NSW 2113
Ph: +61 2 8669 1000
Date of TGA approval: 12 September 2011

Once-Daily
AZILECT[®]
rasagiline



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Download the 2013 MDS International Congress app to your iPhone®, iPad® or Android™

- Search the scientific program
- View schedule of events
- Check poster schedules and much more!

*Remember to enable 'Push Messages' for important Congress updates!



Dear Colleagues,

On behalf of The *Movement* Disorder Society, we are pleased to formally invite you, for the first time, to the continent of Australia. Come to the "land down under" where the sun is warm, the culture is dynamic and the people are welcoming, to attend the 17th International Congress of Parkinson's Disease and Movement Disorders in Sydney, June 16 - 20, 2013.

Situated next to long stretches of ocean and sandy beaches, Sydney is one of the largest, oldest and most multi-ethnic cities in Australia making it one of the world's most beautiful places to live and visit. Let's come together to learn about the latest research and therapies for movement disorders, collaborate with colleagues and actively participate in advancing the field of Movement Disorders, all while enjoying the history, sights, sounds, and tastes of Sydney and Australia.

We are looking forward to welcoming you to Sydney for the 17th International Congress and hope you will take part in the many exciting lectures and educational opportunities the 2013 International Congress offers.

With kind regards,



Günther Deuschl
President,
The *Movement* Disorder Society,
2011-2013



David John Burn
Chair,
Congress Scientific Program Committee,
2011-2013



Victor Fung
Co-Chair,
Congress Scientific Program Committee,
2013



Acknowledgement of Support

The International Congress Oversight Committee of the 17th International Congress of Parkinson's Disease and Movement Disorders wishes to acknowledge and thank the following companies for their support:

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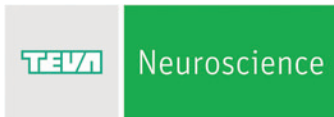
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Above companies are confirmed as of May 5, 2013



About MDS

The *Movement Disorder Society* (MDS) is an international, professional society of clinicians, scientists, and other healthcare professionals who are interested in Parkinson's disease, related neurodegenerative and neurodevelopmental disorders, hyperkinetic movement disorders, and abnormalities in muscle tone and motor control. The spectrum of clinical disorders represented by the Society includes, but is not limited to:

Ataxia
Blepharospasm
Dysphonia
Dystonic disorders
Gait disorders
Huntington's disease
Myoclonus
Parkinson's disease
Restless legs syndrome
Spasticity
Tardive dyskinesia
Tics and Tourette syndrome
Tremor

The *Movement Disorder Society* (MDS) was founded in 1985 on the initiative of Professors Stanley Fahn and C. David Marsden, whose leadership and vision guided the expansion of clinical expertise and research in this field. The organization merged in 1988 with the International Medical Society for Motor Disturbances.

Purpose, Mission And Goals

Purpose:

The objective and mission of the Society shall be to advance the neurological sciences pertaining to Movement Disorders; to improve the diagnosis and treatment of patients; to operate exclusively for scientific, scholarly and educational purposes; to encourage research; to provide forums, such as medical

journals, scientific symposia and International Congresses, for sharing ideas and for advancing the related clinical and scientific disciplines; to encourage interest and participation in the activities of the Society among healthcare and allied professionals and scientists; and to collaborate with other related professional and lay organizations.

Mission and Goals:

To disseminate knowledge about Movement Disorders by:

- Providing educational programs for clinicians, scientists and the general public designed to advance scientific and clinical knowledge about Movement Disorders
- Sponsoring International Congresses and Symposia on Movement Disorders
- Collaborating with other international organizations and lay groups
- Publishing journals, videotapes and other collateral materials committed to high scientific standards and peer review

To promote research into causes, prevention and treatment of Movement Disorders by:

- Using the Society's influence and resources to enhance support for research
- Facilitating the dissemination of information about research
- Encouraging the training of basic and clinical scientists in Movement Disorders and related disorders

For the purposes of favorably affecting the care of patients with Movement Disorders, the Society will provide expertise, advice and guidance to:

- Regulatory agencies to assist them in the approval process of safe and effective therapeutic interventions
- The public (media) and patient support groups by informing them of new research and therapeutic advances
- Governments to assist them in the development of policies that affect support of research and patient care
- Educational efforts to assist in developing standards of training in the specialty





About MDS

MDS Officers (2011-2013)



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President-Elect
Matthew Stern, USA



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Cynthia Comella, USA



Secretary-Elect
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Philip Starr, USA
Matthew Stern, USA
Antonio Strafella, Canada
D. James Surmeier, USA
Ryosuke Takahashi, Japan
Louis Tan, Singapore
Philip Thompson, Australia

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Ainhi Ha
Andrew Hughes
Thomas Kimber
John O'Sullivan
Julian Rodrigues
Barry Snow
Rick Stell
Carolyn Sue
Philip Thompson
David Williams

Past-Presidents

2009-2011 Philip Thompson, Australia
2007-2009 Anthony Lang, Canada
2005-2006 Andrew Lees, United Kingdom
2003-2004 C. Warren Olanow, USA
2001-2002 Werner Poewe, Austria
1999-2000 Mark Hallett, USA
1997-1998 Eduardo Tolosa, Spain
1995-1996 Joseph Jankovic, USA
1991-1994 C. David Marsden, United Kingdom
1988-1991 Stanley Fahn, USA

International Medical Society for Motor Disturbances Past-Presidents

1993-1994 C. Warren Olanow, USA
1991-1992 Bastian Conrad, Germany
1989-1990 Mark Hallett, USA
1987-1988 Mario Manfredi, Italy
1985-1986 C. David Marsden, United Kingdom

MDS International Secretariat

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Membership Information

Membership Benefits

- A subscription to the print, DVD, and online journal, *Movement Disorders*, including supplemental publications, such as *The Movement Disorder Society Evidence Based Medicine Review: Treatments for Motor and Non-Motor Symptoms of Parkinson's Disease*.
- A unique selection of educational opportunities, including live and online CME/CPD activities and reference material on topics in *Movement Disorders*.
- Reduced fees for participation in the Society's educational programs. Educational Programs include the annual International Congress of Parkinson's Disease and Movement Disorders, and regional programs, courses and workshops held each year.
- A searchable online and mobile directory listing mailing addresses, telephone and fax numbers, and e-mail addresses for members.
- A Members-Only Section of the MDS website, including a searchable Video Library, Case of the Month, teaching slide sets, and one-time login access to full text articles in the *Movement Disorders Journal*.
- A quarterly newsletter entitled, *Moving Along*, highlighting current news and views in the field of *Movement Disorders*.
- Participation in the election of international and regional section leadership representatives.

FREE Membership!

Non-Members Applying for Membership

Non-Members will have the opportunity to apply for MDS membership at the International Congress for no additional fee with limited benefits through 2013, and full membership status, receiving the print journal, in January 2014. Membership applications will be provided to all Non-Member attendees onsite in their registration packet and must be returned to the MDS booth prior to the conclusion of the International Congress. No applications will be accepted by the Secretariat after June 20, 2013. **Only those paying the Non-Member registration fee will be eligible to apply for membership at no additional cost. This option is not available to those registering as a Junior or Health Professional participant or anyone who registered as part of a group. It is also not available to those who are already members of MDS.*

2013-2014 will be another exciting year for MDS and we look forward to bringing you news of these and other new initiatives through the *Movement Disorders* journal, *Moving Along* newsletter and the MDS website.

For further information, please contact:
The *Movement Disorder Society*
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Milwaukee, WI 53202 USA
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E-mail: info@movementdisorders.org
Website: www.movementdisorders.org





For Patients with Parkinson's Disease

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SYDNEY, AUSTRALIA
June 16 - 20, 2013

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Education Information

MDS Educational Programming

MDS is committed to advancing the field of Movement Disorders by continuing to expand its educational program. This program offers an increasing variety of high caliber continuing medical education (CME) and continuing professional development (CPD) in movement disorders, including live courses, region-specific education, Internet education, support and endorsement opportunities, and enduring educational materials. MDS educational programming falls under the auspices of the MDS Education Committee, chaired by Louis Tan of the National Neuroscience Institute in Singapore, and co-chaired by Claudia Trenkwalder of Paracelsus-Elena Hospital in Kassel, Germany. The MDS Education Committee coordinates the development of these courses, which originate from one of the three dynamic regional sections: the European Section, the Asian and Oceanian Section, and the Pan American Section. Each section includes an Executive Committee and an Education Committee.

European Section

The MDS European Section (MDS-ES) comprises members who live in Europe as well as select countries in Northern Africa and the Middle East. The ES Executive Committee of The *Movement Disorder Society* is chaired by Werner Poewe of Innsbruck Medical University in Austria. The ES Education Committee is chaired by Joaquim Ferreira of the Lisbon School of Medicine in Portugal. During the past year, MDS-ES educational activities have been held in Paris, France; Stockholm, Sweden; Rome, Italy; Amsterdam, Netherlands; Innsbruck, Austria; Tartu, Estonia; Fès, Morocco; and Iași, Romania (MDS/EFNS Regional Teaching Course). The 6th Annual MDS-ES Summer School for Young Neurologists will be held in London in July 2013, and the first Allied Health Summer School will be held in Nijmegen, Netherlands, also in July 2013. The official MDS-ES website can be found at: www.movementdisorders.org/regional_sections/es/ and includes a wealth of programming and Section information, including leadership and mission, details about MDS Regional Development initiatives, and access to MDS-ES/EFNS European diagnosis and management recommendations. One can also find information on fellowships, links to scholarly papers and keynote publications, and a calendar of events.

For more information on the MDS-ES or its educational offerings, please e-mail: education@movementdisorders.org.

Asian and Oceanian Section

The MDS Asian and Oceanian Section (MDS-AOS) comprises MDS members from the majority of the Asian continent, as well as Australia, New Zealand and Oceania. The AOS Executive Committee of The *Movement Disorder Society* is chaired by Ruey-Meei Wu of National Taiwan University Hospital in Taipei. The Chair of the AOS Education Committee is Ryosuke Takahashi of Kyoto University Graduate School of Medicine in Japan. Madhuri Behari of the All India Institute of Medical Sciences in New Delhi is the Co-Chair of this committee. The AOS was formed in 2006 at the Kyoto, Japan MDS Congress. In the past year, MDS-AOS has helped develop educational programs in Delhi, Jaipur and Vadodara, India; Mandalay, Myanmar; Colombo, Sri Lanka; Kuala Lumpur, Malaysia and Manila, Philippines. The official MDS-AOS website can be found at:

www.movementdisorders.org/regional_sections/aos/ and includes programming and Section information, details about AOS Regional Partners, leadership, the AOS Traveling Fellowship, and a calendar of events.

For further information on the MDS-AOS or its educational opportunities, please e-mail: education@movementdisorders.org.

Asian and Oceanian Parkinson's Disease and Movement Disorders Congress (AOPMC)

To achieve AOS objectives, the AOS organizes a biennial regional congress that is attended by more than 500 doctors, researchers and healthcare professionals from the Asian and Oceanian region. The 4th AOPMC will be held in November 2014 in Bangkok, Thailand. Please visit:

www.movementdisorders.org/aopmc2014 for more information.

Pan American Section

The MDS Pan American Section (MDS-PAS) is composed of members who live in the countries of the Western Hemisphere. The PAS Executive Committee of The *Movement Disorder Society* is chaired by Jorge Juncos of Emory University in Atlanta, GA, USA. The PAS Education Committee is chaired by Irene Litvan of the University of California, San Diego. Over the last 12 months, PAS education courses have taken place in Cochabamba, Bolivia; Santiago, Chile; Buenos Aires and Mendoza, Argentina; Managua, Nicaragua; and Toronto, ON, Canada. The official MDS-PAS website can be found at: www.movementdisorders.org/regional_sections/pas/ and includes a variety of programming and Section information, details about the Regional Needs Assessment Survey, MDS Conference Calendar and PAS calendar of events.

For additional information on the MDS-PAS or its educational programming, please e-mail: education@movementdisorders.org.



Education Information

MDS Outreach Education

MDS is committed to supporting quality movement disorders education in areas worldwide. The following programs were developed to meet the need for movement disorders education in areas currently lacking in continuing medical education in the field. Applications for each of these programs can be accessed at: www.movementdisorders.org/education/outreach_education.php.

For further information on MDS Outreach Education, please e-mail: education@movementdisorders.org.

Developing World Education Program

MDS European Section (ES), the MDS Asian and Oceanian Section (AOS) and the MDS Pan American Section (PAS) members may apply for grants to fund one- to two-day courses devoted to movement disorders. These courses may be stand-alone or joined to a local meeting in areas with a demonstrated need for movement disorders education. As part of this grant, international speakers are funded to speak at each course. Over the last year, programming has taken place in Jaipur, Vadodara, and Delhi, India; Mandalay, Myanmar; Fès, Morocco; and Chiangmai, Thailand.

Ambassador Program

The Ambassador Program supports the travel of 1-2 expert speakers to participate in a major regional or local movement disorders meeting. Sponsored speakers deliver a keynote lecture during the meeting. An honorarium is provided. Over the last year, Ambassador programs have been held in Moscow, Russia; Managua, Nicaragua; Colombo, Sri Lanka; and Mendoza, Argentina.

Visiting Professor Program

The Visiting Professor Program (VPP) supports the travel of 1-2 international experts. During the visit, invited experts conduct teaching seminars in local hospitals or institutions, participate in grand rounds, or provide input for the further development of the local movement disorders treatment and management. Visits may consist of one of these activities or a combination of all three. An honorarium is provided. The VPP program has been hosted over the last year in Buenos Aires, Argentina, and Kuala Lumpur, Malaysia.

MDS Website your 'Communications Hub' at the Congress and all year-round

We invite you to visit the MDS website – your Society's "Communications Hub" for education, news and resources about the field of Movement Disorders. Log on to www.movementdisorders.org to access Members-Only features such as the **Movement Disorders Journal**, **Case of the Month**, **Quick Opinion Please**, **Video Library**, and the **Membership Directory**. Be sure to visit the Regional Sections of the website (European, Asian and Oceanian, and Pan American) to find news and activities happening in your part of the world.

Learn about online **CME** and worldwide professional development opportunities in our **Education** section. The Congress, workshops, conferences and seminars are listed and updated regularly on the website in the **Announcements** section.

MoveNet, a free networking directory for professionals, is a new way for you to meet others who work in the field of Movement Disorders. When you join MoveNet, you will receive updates from MDS delivered right to your inbox.

Website features include:

- Podcasts of the latest *Movement Disorders Abstracts*
- *Movement Disorders Book Reviews*
- Health Professionals (Non-Physician) Resources
- *Movement Disorders Video Library*
- *Moving Along* Newsletter
- Member Videos
- *Movement Disorders Journal*
- MDS-Owned Rating Scales
- MDS-UPDRS and UDysRS Training Program & Exercises
- EBM Reviews and Position Papers

Stay connected with colleagues and friends when you visit the Society's social media communities. Join the MDS group on **Facebook** or join other movement disorders professionals on **LinkedIn**. View video interviews with key leaders in the Society on our **YouTube** channel.

While at Congress, follow MDS on **Twitter** @movedisorder. Get regular updates about news and activities or share your updates on Twitter any time, any place. Be sure to use #MDSCongress2013 in all of your tweets while at the Congress so others can follow your comments!



Scan the code to go directly to the website

www.movementdisorders.org



MDS Educational Resources

Educational DVDs

As part of its educational mission to expand the availability of educational content, MDS produces enduring materials of select programming. The following DVDs exemplify the current offerings of MDS and are available for purchase on the MDS website.

2013 MDS Video Challenge DVD, recorded June 19, 2013, Sydney, Australia

MDS is pleased to offer you the opportunity to view the MDS Video Challenge from the 17th International Congress on DVD. Each DVD includes slides, audio and video. These unique movement disorders cases were presented by representatives from Movement Disorder Centers around the world and discussed by senior experts in the field. The goal of this event was that attendees learn from a series of unusual, intriguing cases and see how senior experts approach and handle them. The DVD of the MDS Video Challenge from the 2013 Congress can be purchased at:

www.mdscongress2013.org/dvds/video-games.php.

MDS Video Games DVD, recorded June 20, 2012, Dublin, Ireland

A DVD of the MDS Video Games from the 2012 Congress can be purchased at: www.movementdisorders.org/congress/congress12/video_games/.

VO Games DVD, recorded June 8, 2011, Toronto, ON, Canada

A DVD of the VO Games from the 2011 Congress can be purchased at: www.movementdisorders.org/congress/congress11/.

Congress Teaching Courses and Themed Sessions

17th International Congress Teaching Courses and Themed Sessions

The Teaching Courses and Themed Courses for the 17th International Congress are available for preorder on the International Congress website at www.mdscongress2013.org/. Each DVD will include slides, audio and video of the recorded presentations, and PDF syllabi for the Teaching Courses. Distribution of DVD orders will begin in September 2013.

The Teaching Course and Themed Course DVDs both include slides, audio, and video. The Teaching Course DVD includes PDF versions of the course syllabi.

17th International Congress Teaching Courses

- Movement disorders and epilepsy
- Biomarkers for early Parkinson's disease
- Movement disorders emergencies
- DBS in movement disorders
- Recognizing and understanding hyperkinetic movement disorders
- Clinical examination in movement disorders
- Imaging techniques in degenerative movement disorders: A window on the pathologist's world (also included on Themed Sessions DVD)
- Update on botulinum toxin treatment

17th International Congress Themed Sessions

- Clinicopathological correlations in Parkinson's disease
- Inclusions in Parkinson's disease: The link between pathology and molecular biology
- The basal ganglia in health and disease
- How to develop and run a brain bank
- The pathophysiology of hyperkinetic movement disorders
- Corticobasal syndrome: Clinical, neuroanatomical and genetic perspectives
- The mysteries of dopamine in health and disease
- How to assess cognitive function in parkinsonian syndromes
- Movement Disorders: Surprises in localization or pathology
- Multiple system atrophy: A wolf in sheep's clothing
- What's new in essential and non-essential tremor?
- Regional atypical parkinsonian syndromes
- Imaging techniques in degenerative movement disorders: A window on the pathologist's world (also included on Teaching Courses DVD)

DVDs from Past Congresses

The following Teaching Courses and Themed Sessions from previous Congresses are available to order at: www.movementdisorders.org/education/resources.php.

16th International Congress Teaching Courses (DVD also available as streaming video August 2013)

This DVD contains recordings of the Teaching Course Sessions of the 16th International Congress of Parkinson's Disease and Movement Disorders in Dublin, Ireland. The DVD includes slides, audio and video of the eight teaching courses and PDF syllabi. The following topics are covered:

- Update on psychogenic movement disorders
- Update on management and diagnosis of early parkinsonism
- Frontotemporal dementias and parkinsonism
- Update on levodopa-induced dyskinesias
- Update on chorea
- Update on atypical parkinsonism
- Invasive therapies for advanced Parkinson's disease
- The non-motor features of Parkinson's disease



MDS Educational Resources

16th International Congress Themed Sessions DVD (also available as streaming video August 2013)

This DVD contains recordings of the Themed Sessions of the 16th International Congress of Parkinson's Disease and Movement Disorders in Dublin, Ireland. The DVD includes slides, audio and video. The following topics are covered:

- Is it time to change how we define Parkinson's disease?
- Molecular methodology for dummies: New investigative tools to shake up our understanding of Parkinson's disease
- Whatever happened to environmental factors in the etiology of Parkinson's disease? Are they still important?
- Is my movement disorder genetic and what does that mean for me and my family?
- Lost in translation: Has genetics informed our knowledge of nonparkinsonian movement disorders?
- Is Parkinson's disease a mitochondrial or proteostatic disorder?
- Imaging genetics in movement disorders
- Frontotemporal dementias and parkinsonism*
- How to critically read and interpret genetic and molecular biological literature in movement disorders (e.g. GWAS studies)
- Clinical clues and pearls in the recognition of the primary dystonias and dystonia plus syndromes: Genotype-Phenotype correlation
- What is essential tremor?
- How to interpret the mysteries of RNA and mitochondrial-mediated pathophysiology in movement disorders
- Clinical clues and pearls in the recognition of genetic forms of parkinsonism

15th International Congress Teaching Courses (available as streaming video only)

The Teaching Sessions of the 15th International Congress of Parkinson's Disease and Movement Disorders in Toronto, ON, Canada, are available as streaming video.

- Update on myoclonus
- Non-motor features of Parkinson's disease cognition
- Impulse control disorders (ICDs)
- From bench top to bedside: Current topics in translation research in movement disorders
- Neurodegeneration: The role of environmental factors
- New Unified Parkinson's Disease Rating Scale: MDS-UPDRS
- Chorea, athetosis, and ballism
- Update on gait disorders

15th International Congress Themed Sessions

- Cognitive decline in movement disorders
- Gilles de la Tourette syndrome
- Psychiatric features of genetic movement disorders
- Bedside evaluation of cognition in movement disorders
- Impulsivity, addiction and reward mechanisms in movement disorders
- An update on psychogenic movement disorders
- Hallucinations and psychosis in Parkinson's disease
- Impulse control disorders (ICDs)
- Psychogenic movement disorders: Video demonstrations and evaluation techniques
- The non-dementia associated cognitive and behavioral features of PD
- Startle, stereotypies and mannerisms; video cases
- Mood changes in Parkinson's disease: Depression, anxiety and apathy

Educational Webcasts

Evidence Based Medicine Update on Treatments for Parkinson's Disease: Webcast

The Evidence Based Medicine Update on Treatments for Parkinson's disease outlines the concept of EBM and then presents the findings from the recent reviews. The following webcast captures this content as it was presented in Toronto, Ontario, Canada, on November 9, 2012.

Course Learning Objectives

1. Explain the concept of evidence based medicine
2. List the treatments available for the management of motor and non-motor symptoms of Parkinson's disease
3. Identify the role of each agent in the treatment of Parkinson's disease as indicated by the evidence based review
4. Discuss the clinical applications of each treatment in the management of Parkinson's disease

To view the webcast, please visit:

www.movementdisorders.org/education/educational_webcasts

2011 Edward I. Rudman Parkinson's Disease Patient and Caregiver Symposium Webcast: Recent advances in Parkinson's Disease

This webcast was created from the *Edward I. Rudman Parkinson's Disease Patient and Caregiver Symposium: Recent Advances in Parkinson's Disease* which took place on October 22, 2011 at The Conference Center at Harvard Medical School. Topics will cover the risk factors for Parkinson's disease, gene therapy, new and future treatments, advances in Deep Brain Stimulation, exercise and dance for Parkinson's disease, and creating a center of excellence.

To view the webcast, please visit: www.movementdisorders.org/education/patient_education/bidmc_2011.



MDS Educational Resources

Internet-based Certified CME

Online Journal CME

Visit www.movementdisorders.org/education/journalcme/ to view a list of Movement Disorders journal articles available for CME credit. MDS is accredited by the Accreditation Council for Continuing Medical Education to provide certified continuing medical educational for physicians. MDS designates a maximum of 1.0 *AMA PRA Category 1 Credit*[™] each. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Coffee Break CME

Coffee Break CME is The *Movement Disorder Society's* first online CME program specially designed for the busy clinician. For physicians who care for Parkinson's disease (PD) and movement disorders patients, continuing education is critical to providing the best care possible. This program is designed to provide this information in a modular format. Each module focuses on a single topic that can be completed in a short period of time and provide the clinician with updated information that is relevant to their practice.

Currently, there are four modules available, covering topics in tremor and Parkinson's disease. Once users have registered for a module, they are able to log in to the site as many times as needed to view all the material. MDS is accredited by the Accreditation Council for Continuing Medical Education to certify a maximum of 2.0 *AMA PRA Category 1 Credits*[™] for each module. Physicians should only claim credit commensurate with the extent of their participation in the activity. Coffee Break CME can be accessed at: www.mdscoffeekcme.org/.

General Movement Disorders Resources

Parkinson and Movement Disorders Curriculum

The Parkinson and Movement Disorders (PMD) Curriculum is an overview of movement disorders and a clinical approach to the evaluation and management of common movement disorders. This curriculum is specially developed for trainees, internists, general neurologists and other clinicians interested in acquiring basic understanding of movement disorders. It is possible to apply for use of any specific topics or for the full curriculum to supplement an existing program. To learn more about how to apply to use the PMD Curriculum, please visit: www.movementdisorders.org/education/bmd_curriculum/.

Request for use may also be included with an application to any of the MDS Outreach Education Programs at: www.movementdisorders.org/education/outreach_education.php.

Available topics:

- Basal ganglia anatomy and physiology
- Phenomenology of Movement Disorders
- Etiology and pathogenesis of Parkinson's disease
- Diagnosis and differential diagnosis of Parkinson's disease
- Management of early Parkinson's disease
- Management of Advanced Parkinson's disease
- Tremor
- Dystonias
- Chorea, athetosis and ballism
- Myoclonus
- Gait disorders
- Restless legs syndrome and movement disorders in sleep
- Management of MSA, PSP, and CBDG
- Tics and Tourette Syndrome
- Drug-Induced Parkinsonism (DIP)
- Psychogenic Movement Disorders

Rating Scales and Training Videos

Rating Scales

MDS provides rating scales and related resources published by the Movement Disorders journal to physicians, researchers and health professionals interested in Parkinson's disease and other movement disorders. By making these scales available, MDS works to improve the diagnosis of movement disorders and patient care, as well as increase the validity and reliability of research studies. You can access the rating scales below online by visiting: www.movementdisorders.org/publications/rating_scales/. Links to the MDS-UPDRS and UDysRS training programs and rating scales use permission forms are also available at this address. Licensing rates are free for individual use, but fees may apply for government, nonprofit or industry funded research.

The following rating scales are currently available:

- Global Assessment Scale for Wilson's Disease (GAS for WD)
- Global Dystonia Scale
- Non-Motor Symptoms Scale (NMSQ) + (Includes NMSQ)
- Quality of Life Essential Tremor Questionnaire (QUEST)
- Rating Scale for Psychogenic Movement Disorders (PMD)
- Rush Dyskinesia Rating Scale *
- Rush Videobased Tic Rating Scale
- UFMG Sydenham's Chorea Rating Scale (USCRS)
- Unified Dyskinesia Rating Scale (UDysRS) + *
- Unified Dystonia Rating Scale (UDRS)
- Unified Multiple System Atrophy Rating Scale (UMSARS)
- Unified Parkinson's Disease Rating Scale (MDS-UPDRS) + *

Asterisk (*) indicates scale was developed by MDS; plus symbol (+) indicates translations of the scale are available.



MDS Educational Resources

Training Videos

The *Movement* Disorder Society publishes several audiovisuals, which are available for sale from the MDS International Secretariat. All materials are available in DVD or VHS format. Special reduced rates are available to MDS members. For more information or to place an order, visit: www.movementdisorders.org/publications/estore.php.

The titles that are currently available for purchase include:

Instructional Video for Motor Fluctuation Diaries in Parkinson's Disease

Authored by C.G. Goetz, M. Grobman, L. Blasucci, and G.T. Stebbins, this instructional video demonstrates the 3 states of Parkinson's disease, off, on, and on with dyskinesia, with the intent to assist patients in completion of their motor fluctuation diaries. This video is 15 minutes.

Toronto-Western Spasmodic Torticollis Rating Scale TWSTRS Training Video

Authored by C. Comella, S. Bressman, C.G. Goetz, and A. Lang, this instructional video demonstrates the 10 categories in the TWSTRS scale with verbal and visual examples of scoring in each category. This video is approximately 1 hour and 25 minutes.

Unified Dyskinesia Rating Scale Teaching Program (UDysRS)

Authored by C.G. Goetz, J. G. Nutt and G.T. Stebbins. This teaching program provides guidelines and rating examples of the Unified Dyskinesia Rating Scale, a new scale used for evaluating Parkinson's disease. This video is approximately 52 minutes.

Utility of an Objective Dyskinesia Rating Scale for Parkinson's Disease: (Rush Dyskinesia Rating Scale)

Authored by Goetz, et al. *Movement* Disorders Volume 9, Video Supplement. 2. This video provides guidelines and rating examples of the Rush Dyskinesia Rating Scale, a scale widely used for evaluating dyskinesias in Parkinson's disease. This video is approximately 17 minutes.

Unified Parkinson's Disease Rating Scale Training Video

(1995) Authored by C. G. Goetz, G.T. Stebbins, T. Chmura, S. Fahn, H. Klawans, and C. D. Marsden, this video demonstrates the different categories of the motor section of the UPDRS, with verbal and visual examples of scoring in each category. This video is approximately 1 hour.

Standardized Training Tools for the UPDRS Activities of Daily Living Scale" (UPDRS Part II)

(2003) Authored by C.G. Goetz, P.A. Lewitt, and M. Weidenman. *Movement* Disorders Volume 18, Video Supplement. 2. This video provides suggestions on the application and interview techniques for Part II of the UPDRS with patient examples and guidelines for raters. This video is approximately 1 hour and 15 minutes.

The Movement Disorder Society's Unified Parkinson's Disease Rating Scale (MDS-UPDRS) Training Video (2010)

The *Movement* Disorder Society (MDS)-sponsored new version of the UPDRS is founded on the critique that was formulated by the Task Force for Rating Scales in Parkinson's disease (*Mov Disord* 2003;18:738-750). The MDS-UPDRS has four parts: Part I (non-motor experiences of daily living), Part II (motor experiences of daily living), Part III (motor examination) and Part IV (motor complications). This video is approximately 2 hours and 5 minutes.

Members-Only Educational Resources

The following resources are available to members only:

Case of the Month

Case of the Month is the MDS interactive online feature that presents unique and challenging movement disorders cases. MDS accepts submission for Case of the Month on a rolling basis. Case of the Month provides an opportunity for members to share interesting cases for educational purposes in the forum dedicated to movement disorders experts. To view the current Case of the Month, please visit: www.movementdisorders.org/membersonly/com/.

For information about submission requirements, including video format and patient consent forms, please visit: www.movementdisorders.org/membersonly/com/submit.php.

Slide Sets

This service enables learners to become familiar with the differential diagnosis and clinical features that define the various common involuntary movements as well as the course of treatment and complications of movement disorders. Slide sets are available at: www.movementdisorders.org/membersonly/slidesets/. These slide sets are also available in Spanish.

Currently available slide sets are:

- Ataxia (Jennifer G. Goldman)
- Chorea (Kathleen M. Shannon)
- The Diagnosis and Management of Dystonia (Steven J. Frucht)
- Myoclonus: Diagnosis and Treatment (Steven J. Frucht)
- Parkinsonism (Kathleen M. Shannon)
- Restless Legs Syndrome (Charles H. Adler)
- Tics and Tourette Syndrome (Jennifer G. Goldman)

Video Library

The Video Library consists of video supplements from *Movement Disorders* journal since 1986. You may search the Video Library by keyword, author, volume and issue, or a combination of these fields. The Video Library is available at: www.movementdisorders.org/membersonly/videolibrary/.



Continuing Medical Education (CME) Information

Purpose

The purpose of the MDS International Congress is to offer a forum for clinical and basic discussion on a variety of Movement Disorder topics, including presentations of current research and available treatments.

Learning Objectives

Through state-of-the-art lectures, hot topic reviews, controversy debates, teaching courses, skills workshops and video sessions, participants will be better able to:

1. Describe the pathophysiology and neurobiology of Parkinson's disease and other movement disorders;
2. Discuss the diagnostic approaches and tools available for Parkinson's disease and other movement disorders;
3. Discuss the pharmacological and non-pharmacological treatment options available for Parkinson's disease and other movement disorders.

Continuing Medical Education

The *Movement Disorder Society* designates this live activity for a maximum of 35.5 *AMA PRA Category 1 Credits*[™]. Physicians should claim only credit commensurate with the extent of their participation in the activity.

MDS 17th International Congress of Parkinson's Disease and Movement Disorders" is accredited by the European Accreditation Council for Continuing Medical Education (EACCME) to provide the following CME activity for medical specialists. The EACCME is an institution of the European Union of Medical Specialists (UEMS), www.uems.net.

The "MDS 17th International Congress of Parkinson's Disease and Movement Disorders" is designated for a maximum of (or "for up to") 29 hours of European external CME credits. Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

Through an agreement between the European Union of Medical Specialists and the American Medical Association, physicians may convert EACCME credits to an equivalent number of *AMA PRA Category 1 Credits*[™]. Information on the process to convert EACCME credit to AMA credit can be found at www.ama-assn.org/go/internationalcme.

Live educational activities, occurring outside of Canada, recognized by the UEMS-EACCME for ECMEC credits are deemed to be Accredited Group Learning Activities (Section 1) as defined by the Maintenance of Certification Program of The Royal College of Physicians and Surgeons of Canada.

Target Audience

The target audience of the 17th International Congress of Parkinson's Disease and Movement Disorders includes clinicians, researchers, post-doctoral fellows, medical residents, medical students and other healthcare professionals with an interest in the current research and approaches for the diagnosis and treatment of movement disorders.

Faculty Financial Disclosure Information

It is the policy of The *Movement Disorder Society* (MDS) to ensure balance, independence, objectivity and scientific rigor in all sponsored educational activities. All faculty participating in any MDS sponsored activities are required to disclose to the activity audience any real or apparent conflict(s) of interest that may have a direct bearing on the subject matter of the Continuing Medical Education (CME) activity. This pertains to relationships with pharmaceutical companies, biomedical device manufacturers, or other corporations whose products or services are related to the subject matter of the presentation topic. The intent of this policy is not to prevent a speaker with a potential conflict of interest from making a presentation. It is merely intended that any potential conflict should be identified openly so that the listeners may form their own judgments about the presentation with the full disclosure of the facts. It remains for the audience to determine whether the speaker's outside interest may reflect a possible bias in either the exposition or the conclusions presented.

Faculty financial disclosure information will be provided to participants in Sydney.

Claiming CME Credit

To claim CME credit for your participation in the MDS 17th International Congress of Parkinson's Disease and Movement Disorders, International Congress participants must complete and submit an online CME Request Form. This form will be available beginning June 20th.

Instructions for claiming credit:

- After June 20, 2013, please visit: www.mdscongress2013.org/registration/cme
- Log in after reading the instructions on the page. You will need your International Congress File Number which is located on your name badge or e-mail congress@movementdisorders.org
- Follow the on-screen instructions to claim CME credit for the sessions you attended
- You may print your certificate from your home or office, or save it as a PDF for your records

Dysport®

BOTULINUM TOXIN TYPE A

Working with you to manage patients with spasticity and dystonia



PBS Information: Restricted benefit. Section 100: Botulinum Toxin Program. Refer to PBS schedule for full authority information.

Before prescribing please refer to full Product Information, which is available from Ipsen Medical Information, Ph: (03) 8544 8100 or from <http://secure.healthlinks.net.au/content/ipsen/pi.cfm?product=ispdyspi>

Dysport®: *Clostridium botulinum* type A toxin-haemagglutinin complex (300, 500 IPSEN UNITS/vial). **Indications:** Spasticity of the upper limb in adults post-stroke; spasmodic torticollis in adults; dynamic equinus foot deformity due to spasticity in cerebral palsy patients, two years of age or older; blepharospasm in adults; hemifacial spasm in adults; moderate to severe glabellar lines in adults. **Contraindications:** Hypersensitivity to ingredients; myasthenia gravis or Eaton-Lambert (myasthenic) syndrome; infection at proposed injection site. **Precautions:** Do not exceed recommended dosages and frequencies of administration; adverse effects from toxin distribution to sites remote from the site of administration have been very rarely reported (excessive muscle weakness, dysphagia, aspiration pneumonia that may be fatal); use lowest effective dose and do not exceed recommended dose; use with caution in patients with: breathing and swallowing difficulties, evidence of drug-induced neuromuscular weakness/motor neurone disorders, and prolonged bleeding times; rare occurrence of antibody formation to botulinum toxin; contains small amount of human albumin so the risk of transmission of viral infection cannot be excluded; ready availability of adrenaline injection in cases of anaphylactic reaction. **Drug Interactions:** Muscle relaxants, aminoglycoside antibiotics and other drugs – use such drugs with caution (see full PI). **Effect on driving/using machinery:** Potential risk of muscle weakness or visual disturbances may temporarily impair ability to drive or operate machinery. Use in pregnancy only if benefit justifies risk; not recommended in lactation. *Dysport® is not therapeutically equivalent to the other botulinum type A toxin preparation available in Australia. Extreme caution is required should it prove necessary to substitute the botulinum type A toxin of one pharmaceutical company by another.* **Adverse Events:** Common to very common depending on indication: generalised weakness, fatigue, 'flu-like syndrome, pain/bruising/swelling/reddening at injection site; dysphagia, weakness of the muscle being injected and/or adjacent muscle(s), accidental injuries/falls; headache, dizziness, facial paresis, blurred vision, visual acuity reduced, dysphonia, dyspnoea, dry mouth, neck pain, musculoskeletal pain, myalgia, pain in extremity, musculoskeletal stiffness; diarrhoea, urinary incontinence, abnormal gait; ptosis; diplopia; dry eyes, tearing; eyelid oedema; asthenopia, muscle twitching – see full PI. **Dose:** *The units of Dysport® are not interchangeable with other preparations of botulinum type A toxin.* There should be a minimum interval between treatments of 12 weeks. **Spasticity of upper limb post stroke:** 500–1000 units per session, distributed amongst five muscles. **Spasmodic torticollis:** Initially 250–500 units in divided doses; subsequent doses between 250–1000 units. **Cerebral palsy spasticity:** Initially 20 units/kg bodyweight (10 units/kg for each calf); subsequent doses titrated between 10–30 units/kg bodyweight, divided between both legs. Dose must not exceed 1000 units per session. **Blepharospasm & hemifacial spasm:** Initially 40 units/eye; subsequent dose of 80 units/eye for longer duration to maximum of 120 units/eye. **Glabellar lines:** 50 units divided equally among 5 injection sites. **Administration:** Intramuscular injection for all indications except blepharospasm/hemifacial spasm where it is injected subcutaneously. *See full PI for guidance on specific muscle sites to be injected and reconstitution instructions for 300U and 500U vials.* **Storage:** 2°C–8°C. **Date of first inclusion in ARTG:** 16 June 2000 **Date of most recent amendment:** 20 September 2012.

For further information about Dysport®, contact your Ipsen representative or email us at info@ipsen.com.au.

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Innovation for patient care

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Dysport® is a registered trademark - Date of preparation April 2013 - Option K IPS20000

 **Dysport®**
BOTULINUM TOXIN TYPE A



International Congress Information A-Z

Abstracts and Poster Sessions

All accepted abstracts are presented as a poster at the 2013 International Congress, and published in an electronic supplement to the *Movement Disorders* journal, online edition. Additionally, select abstracts are presented in a Guided Poster Tour. Please visit www.movementdisorders.org to access The *Movement Disorders* Journal, where you can download a PDF of accepted abstracts.

Please see Poster Sessions and Guided Poster Tours for a listing of daily abstract presentations. For a complete listing of abstracts by topic, please see pages 22-24.

Late-Breaking Abstracts

All accepted Late-Breaking Abstract posters are displayed in Exhibition Hall 5, Monday through Thursday for the duration of the Congress.

Late-Breaking Abstract Poster presentations will take place Wednesday, June 19 from 12:00 – 13:30 in Exhibition Hall 5. A print supplement of the Late-Breaking Abstracts is available with the Congress registration materials.

MDS Study Group Abstracts

All accepted MDS Study Group Abstract posters are displayed in Exhibition Hall 5, Monday through Thursday for the duration of the Congress.

MDS Study Group Abstract Poster Presentations will take place Wednesday, June 19 from 12:00 – 13:30 in Exhibition Hall 5. A print supplement of the MDS Study Group Abstracts is available with the Congress registration materials.

Badges

All International Congress attendees will receive a name badge with their registration materials. Badges should be worn at all times as they are used to gain access into all International Congress sessions and activities. Badge colors will be identified as follows:

Blue = Delegate
Yellow = Exhibitor
Purple = Press
Black = Staff

Camera Policy

Cameras are not permitted in any 17th International Congress educational sessions or in the poster areas.

Certificate of Attendance

A certificate of attendance is available in the back of this Final Program.

Coffee Breaks

Please check the Program-at-a-Glance, page 36, for scheduled daily breaks. Coffee and tea will be available at the following times/locations:

Sunday, June 16, 10:00 – 11:00 Bayside Foyer
Monday, June 17, 10:00 – 10:30 Exhibition Hall 5
Tuesday, June 18, 10:00 – 11:00 Exhibition Hall 5
Wednesday, June 19 10:00 – 10:30 Exhibition Hall 5
Thursday, June 20, 9:30 – 10:00 Exhibition Hall 5

Congress Information Desk

Location: Parkside Promenade, Ground Level (near Registration)

Continuing Medical Education (CME)

Please refer to page 17 for Continuing Medical Education information.

Currency

The exchange rate for US Dollars as of May 9, 2013 is:
1 USD = .98 AUD.

Evaluations

Please take time to complete the evaluation form provided at each session you attend. Your input and comments are essential in planning future educational programs for MDS.

Upon completion, evaluations may be returned to the session room attendants, or to the MDS Booth (located in Exhibition Hall 5).

Events

Welcome Ceremony
Sunday, June 16, 2013
19:30 to 21:30

All International Congress attendees are warmly invited to meet friends and colleagues during the traditional International Congress Welcome Ceremony, at the Sydney Convention and Exhibition Centre. This event is open to all registered delegates. Guests that are not registered delegates are able to purchase a Welcome Ceremony Pass that will allow them admission to this event. Please see below for more information on the Welcome Ceremony Pass.

Welcome Ceremony Pass

Participants who wish to bring an accompanying guest to the Welcome Ceremony may purchase a Welcome Ceremony Pass for \$40 USD as part of their registration process. This Pass can only be used during the evening of the Welcome Ceremony on Sunday, June 16.



International Congress Information A-Z

MDS Video Challenge Pre-Event Gathering

Wednesday, June 19, 2013

19:00 – 20:00

Location: Bayside Grand Hall

MDS Video Challenge

Wednesday, June 19, 2013

20:00 – 22:00

Location: Bayside Auditorium B

Please join Masters of Ceremony Anthony Lang and Kapil Sethi as they host a world-renowned panel of Movement Disorders experts in guiding participants through unique Movement Disorder cases. The cases will be presented by representatives from Movement Disorder Centers around the world and discussed by the Panel of Experts. Awards will be given for the most interesting and challenging basis. Country pride will add an enjoyable spirit of competition to this event. The goal of this session is for attendees to learn from a series of unusual, very interesting patients and see how senior experts approach these types of challenging cases.

The 2013 Panel of Experts are:

Kailash Bhatia, *United Kingdom*

Marina De Koning-Tijssen, *Netherlands*

Werner Poewe, *Austria*

Rick Stell, *Australia*

Eng-King Tan, *Singapore*

Following the International Congress, the cases presented could be developed further for publication in the Journal or presentation on the Society's website. This event is open to all registered delegates.

Exhibit Hall

Location: Exhibition Hall 5

For more information, please refer to pages 64-65.

Exhibit Hall hours are as follows:

Sunday, June 16 19:30 – 21:30*

Monday, June 17 9:00 – 18:00

Tuesday, June 18 9:00 – 18:00

Wednesday, June 19 9:00 – 18:00

Thursday, June 20 9:00 – 16:00

(*during Welcome Ceremony)

Floor Plans of the Sydney Convention and Exhibition Centre

Please refer to page 26-27.

Guided Poster Tours

Guided Poster Tours will be led by members of the MDS faculty & leadership and the authors will be present to discuss the abstracts. There will be 16 total Guided Poster Tours with four simultaneous tours per day from Monday, June 17 through Thursday, June 20. Each tour will feature abstracts on a specific topic.

Please refer to page 25 for further Guided Poster Tour information and schedules.

MDS Booth

Location: Exhibition Hall 5

The MDS Booth hours are as follows:

Sunday, June 16 19:30 – 21:30*

Monday, June 17 9:00 – 18:00

Tuesday, June 18 9:00 – 18:00

Wednesday, June 19 9:00 – 18:00

Thursday, June 20 9:00 – 16:00

(*during Welcome Ceremony)

MDS Rating Scales Testing Room Information

Location: Parkside G01, Ground Level

- See examples of a rater administering the test to patients
- View examples of the rating items for the Motor Examination (Part III)
- Take an exercise at the end of the Training Program

The Rating Scales Testing Room hours are as follows:

Sunday, June 16 13:00 – 14:30

Monday, June 17 12:30 – 15:30

Tuesday, June 18 12:30 – 15:30

Wednesday, June 19 12:00 – 15:00

Thursday, June 20 12:00 – 15:00

Official Language

The official language of the International Congress is English.

Press Information

Members of the working media receive waived registration for the 17th International Congress. Journalists and writers should report to the Congress Information Desk, Parkside Promenade, Ground Level, with their credentials to register for the International Congress. All press must wear their name badge for admittance into MDS sessions.



International Congress Information A-Z

Registration Desk

Location: Parkside Promenade, Ground Level

Name badges, scientific session tickets, purchased Welcome Ceremony Passes and International Congress bags can be collected at the International Congress Registration Desk.

Registration Desk hours are as follows:

Saturday, June 15.....	16:00 – 20:00
Sunday, June 16.....	7:00 – 18:00
Monday, June 17.....	7:00 – 18:00
Tuesday, June 18.....	7:00 – 18:00
Wednesday, June 19.....	7:00 – 18:00
Thursday, June 20.....	7:00 – 16:00

* Please note that these hours are subject to change.

Scientific Sessions

The 2013 Scientific Program will incorporate Therapeutic Plenary Sessions, Plenary and Parallel Sessions, Teaching Courses, Video Sessions, Skills Workshops, Guided Poster Tours and Blue Ribbon Highlights.

Sessions will focus on the latest developments in:

- Genetics in Movement Disorders
- Movement Disorder topics, including, but not limited to, ataxia, chorea, dystonia, myoclonus, Parkinson's disease, restless legs syndrome, spasticity, stereotypies, tics and tremors
- Basic Science issues, including, but not limited to, genetics, neuroimaging, neuropharmacology, surgical therapy and transplantation
- Other less common clinical conditions

Special Accessibility Needs

To ensure any special needs can be properly met, special needs should have been addressed in advance with the MDS International Secretariat. Delegates requiring special arrangements in order to fully participate in the International Congress should provide a written description of such needs to the Congress Information Desk upon arrival.

Speaker Ready Room

Location: Bayside 101, Level 1

All speakers and Guided Poster Tour presenters must check in at the Speaker Ready room with their presentation materials the day prior to their scheduled presentation. Equipment is available to allow faculty and presenters to review their presentations. Audio/Visual personnel will be available for assistance.

The Speaker Ready Room hours are as follows:

Saturday, June 15.....	16:00 – 20:00
Sunday, June 16.....	7:00 – 18:00
Monday, June 17.....	7:00 – 18:00
Tuesday, June 18.....	7:00 – 18:00
Wednesday, June 19.....	7:00 – 18:00
Thursday, June 20.....	7:00 – 16:00

Ticketed Sessions

Tickets are required for admission into all Parallel Sessions, Teaching Courses, Video Sessions, and Skills Workshops. There is no additional fee for tickets to these sessions. Please check the Registration Desk for ticket availability.

Therapeutic Plenary Sessions, Plenary Sessions, Guided Poster Tours and poster sessions do not require a ticket to attend.

Venue

The Sydney Convention and Exhibition Centre
Darling Harbour
Sydney NSW 2000
Australia

Weather

The average daytime temperature in Sydney in June is approximately 50° F (10° C).



Abstract Information

Poster Sessions

Poster sessions give each delegate an opportunity to view their colleagues' posters on the most current research in the field of Movement Disorders. Authors will be present for 1.5 hours each day to explain their work and answer questions. All accepted abstracts are presented as a poster at the 2013 International Congress.

Poster sessions will be held Monday through Thursday during the Congress, in the Sydney Convention and Exhibition Centre, Exhibition Hall 5. Posters are available for viewing from 9:00 – 18:00 Monday through Wednesday, and 9:00 – 16:00 on Thursday. Poster session schedules vary by date; please see the *Poster Session Schedules* for specific times and session topics.

Late-Breaking Abstracts

All accepted Late-Breaking Abstract posters are displayed in Exhibition Hall 5, Monday through Thursday throughout the duration of the Congress. Late-Breaking Abstract Poster Presentations will take place Wednesday, June 19 from 12:00 – 13:30 in Exhibition Hall 5.

MDS Study Group Abstracts

All accepted MDS Study Group Abstract posters are displayed in Exhibition Hall 5, Monday through Thursday throughout the duration of the International Congress. MDS Study Group Abstract Poster Presentations will take place Wednesday, June 19 from 12:00 – 13:30 in Exhibition Hall 5.

Abstract Publication

All regular accepted abstracts are published in a supplement to the MDS Journal. Please visit www.movementdisorders.org to access The *Movement Disorders Journal*, where you can download a PDF of accepted abstracts. Late-Breaking Abstracts and MDS Study Group Abstracts will be published as a print supplement in the Congress registration bag.

Poster Session Schedules

Sunday, June 16, 2013

No poster sessions on Sunday

Monday, June 17, 2013

Poster Session: 12:30 – 14:00

Poster viewing: 9:00 – 18:00

Location: Exhibition Hall 5

Poster numbers	Poster Topic
1 - 95	Dystonia
96 - 104	Gene Therapies and Cell-based Therapies
105 - 182	Neuroimaging
183 - 197	Parkinson's disease: Dysautonomia
198 - 242	Parkinson's disease: Electrophysiology
243 - 292	Parkinson's disease: Quality of Life/Caregiver burden
293 - 323	Parkinson's disease: Rating scales
324 - 330	Rating scales

Tuesday, June 18, 2013

Poster Session: 12:30 – 14:00

Poster viewing: 9:00 – 18:00

Location: Exhibition Hall 5

Poster numbers	Poster Topic
331 - 382	Parkinson's disease: Behavioral disorders
383 - 499	Parkinson's disease: Clinical Trials (parkinson plus and secondary)
500 - 575	Parkinson's disease: Cognition
576 - 620	Parkinson's disease: Neuropharmacology
621 - 649	Parkinson's disease: Sleep disorders
650 - 657	Restless legs syndrome
658 - 665	Tics/Stereotypies



Abstracts

Poster Session Schedules

Wednesday, June 19, 2013

Poster Session: 12:00 – 13:30

Poster viewing 9:00 – 18:00

Location: Exhibition Hall 5

Poster numbers	Poster Topic
666 - 713	Ataxia
714 - 730	Choreas (non-Huntington's disease)
731 - 742	Clinical Electrophysiology
743 - 769	Huntington's disease
770 - 849	Parkinsonism (secondary and parkinsonism-plus)
850 - 911	Parkinson's disease: Phenomenology
912 - 938	Pediatric movement disorders
939 - 979	Tremor
980 - 991	Wilson's disease, storage and metabolic movement disorders

Late-Breaking Abstracts Poster Session

Poster Session: 12:00 – 13:30

Location: Exhibition Hall 5

MDS Study Group Abstracts Poster Session

Poster Session: 12:00 – 13:30

Location: Exhibition Hall 5

Thursday, June 20, 2013

Poster Session: 13:00 – 14:30

Poster viewing: 9:00 – 16:00

Location: Exhibition Hall 5

Poster numbers	Poster Topic
992 - 998	Drug-induced movement disorders
999 - 1003	Spasticity
1004 - 1068	Basic Science
1069 - 1080	Education in movement disorders
1081 - 1104	Epidemiology
1105 - 1173	Genetics
1174 - 1178	History
1179 - 1187	Lewy Body Dementia and other dementias in movement disorders
1188 - 1195	Myoclonus
1196 - 1206	Neuropharmacology
1207 - 1216	Quality of life/caregiver burden in movement disorders
1217 - 1247	Surgical Therapy: Other movement disorders
1248 - 1322	Surgical Therapy: Parkinson's disease



The *Movement Disorder Society*

MDS Rating Scales Training Programs

Training programs for the Unified Parkinson's Disease Rating Scale (MDS-UPDRS) and the Unified Dyskinesia Rating Scale (UDysRS)

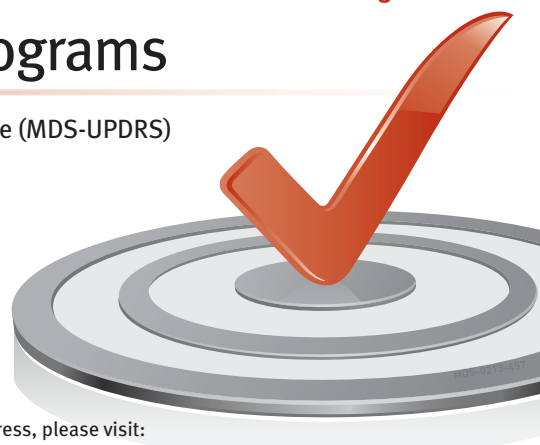
- See examples of a rater administering the scales to patients
- View examples of the rating items
- Take an exercise at the end of the training program

Testing room hours: Sun. June 16: 13:00pm – 14:30pm;
Mon. June 17: 12:30 – 15:30; Tues. June 18: 12:30 – 15:30;
Wed. June 19: 12:00 – 15:00; Thurs. June 20: 12:00 – 15:00

Location: Parkside G01, Ground Level

For more information or to take the MDS Rating Scale Training Programs before Congress, please visit:
www.movementdisorders.org/updrs or udysrs.movementdisorders.org.

Now available at the 17th
International Congress





Abstracts

Poster Session Topics (Alphabetically)

666 - 713	Ataxia <i>Wednesday, June 19</i>	198 - 242	Parkinson's disease: Electrophysiology <i>Monday, June 17</i>
1004 - 1068	Basic Science <i>Thursday, June 20</i>	576 - 620	Parkinson's disease: Neuropharmacology <i>Tuesday, June 18</i>
714 - 730	Choreas (non-Huntington's disease) <i>Wednesday, June 19</i>	850 - 911	Parkinson's disease: Phenomenology <i>Wednesday, June 19</i>
731 - 742	Clinical Electrophysiology <i>Wednesday, June 19</i>	243 - 292	Parkinson's disease: Quality of Life/ Caregiver burden <i>Monday, June 17</i>
992 - 998	Drug-induced movement disorders <i>Thursday, June 20</i>	293 - 323	Parkinson's disease: Rating scales <i>Monday, June 17</i>
1 - 95	Dystonia <i>Monday, June 17</i>	621 - 649	Parkinson's disease: Sleep disorders <i>Tuesday, June 18</i>
1069 - 1080	Education in movement disorders <i>Thursday, June 20</i>	912 - 938	Pediatric movement disorders <i>Wednesday, June 19</i>
1081 - 1104	Epidemiology <i>Thursday, June 20</i>	1207 - 1216	Quality of life/caregiver burden in movement disorders <i>Thursday, June 20</i>
96 - 104	Gene Therapies and Cell-based Therapies <i>Monday, June 17</i>	324 - 330	Rating scales <i>Monday, June 17</i>
1105 - 1173	Genetics <i>Thursday, June 20</i>	650 - 657	Restless legs syndrome <i>Tuesday, June 18</i>
1174 - 1178	History <i>Thursday, June 20</i>	999 - 1003	Spasticity <i>Thursday, June 20</i>
743 - 769	Huntington's disease <i>Wednesday, June 19</i>	1217 - 1247	Surgical Therapy: Other movement disorders <i>Thursday, June 20</i>
1179 - 1187	Lewy body dementia and other dementias in movement disorders <i>Thursday, June 20</i>	1248 - 1322	Surgical Therapy: Parkinson's disease <i>Thursday, June 20</i>
1188 - 1195	Myoclonus <i>Thursday, June 20</i>	658 - 665	Tics/Stereotypies <i>Tuesday, June 18</i>
105 - 182	Neuroimaging <i>Monday, June 17</i>	939 - 979	Tremor <i>Wednesday, June 19</i>
1196 - 1206	Neuropharmacology <i>Thursday, June 20</i>	980 - 991	Wilson's disease, storage and metabolic movement disorders <i>Wednesday, June 19</i>
770 - 849	Parkinsonism (secondary and parkinsonism-plus) <i>Wednesday, June 19</i>		
331 - 382	Parkinson's disease: Behavioral disorders <i>Tuesday, June 18</i>		
383 - 499	Parkinson's disease: Clinical Trials <i>Tuesday, June 18</i>		
500 - 575	Parkinson's disease: Cognition <i>Tuesday, June 18</i>		
183 - 197	Parkinson's disease: Dysautonomia <i>Monday, June 17</i>		



Guided Poster Tours

Guided Poster Tours give groups of delegates an opportunity to hear discussion on a select group of abstracts in several sub-categories. Attendance is limited, and admission will be granted on a first-come, first-served basis (up to 150 attendees). 2013 Guided Poster Tours do not require a ticket to attend.

Publication

A list of Guided Poster Tour abstracts and authors can be found on pages 70-77. Abstracts selected for a Guided Poster Tour presentation are published in a supplement to the MDS Journal.

Guided Poster Tour Schedule

Sunday, June 16, 2013

No Guided Poster Tours on Sunday

Monday, June 17, 2013

12:30 – 14:00

GPT 1: Basic science	Bayside Level 1, Bayside Gallery A
GPT 2: Parkinson's disease: Behavioral disorders <i>Supported by an unrestricted educational grant from UCB Pharma SA</i>	Bayside Level 1, Bayside Gallery B
GPT 3: Parkinson's disease: Neuropharmacology	Bayside Level 2, Bayside 201-203
GPT 4: Sleep disorders and RLS <i>Supported by an unrestricted educational grant from UCB Pharma SA</i>	Bayside Level 2, Bayside 204

Tuesday, June 18, 2013

12:30 – 14:00

GPT 5: Dystonia	Bayside Level 1, Bayside Gallery A
GPT 6: Parkinsonisms (parkinson plus and secondary)	Bayside Level 1, Bayside Gallery B
GPT 7: Rating scales and assessment tools	Bayside Level 2, Bayside 201-203
GPT 8: Surgical therapy: Parkinson's disease	Bayside Level 2, Bayside 204

Wednesday, June 19, 2013

12:00 – 13:30

GPT 9: Parkinson's disease: Cognition	Bayside Level 1, Bayside Gallery A
GPT 10: Genetics	Bayside Level 1, Bayside Gallery B
GPT 11: Lewy body dementia and other dementias in movement disorders	Bayside Level 2, Bayside 201-203
GPT 12: Surgical therapy of movement disorders other than Parkinson's disease	Bayside Level 2, Bayside 204

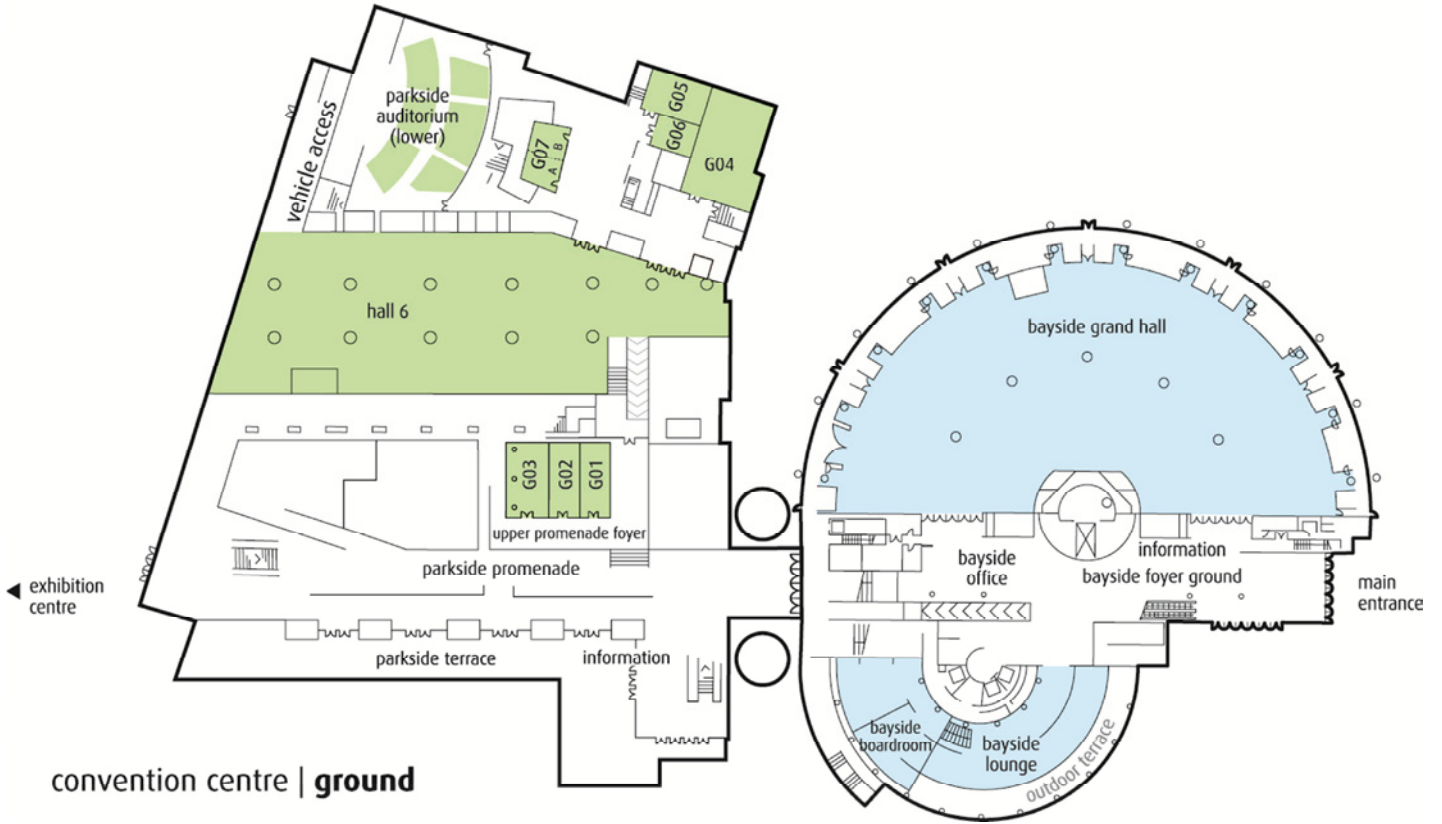
Thursday, June 20, 2013

13:00 – 14:30

GPT 13: Huntington's disease	Bayside Level 1, Bayside Gallery A
GPT 14: Parkinson's disease: Clinical trials	Bayside Level 1, Bayside Gallery B
GPT 15: Parkinson's disease: Phenomenology	Bayside Level 2, Bayside 201-203
GPT 16: Tremor	Bayside Level 2, Bayside 204

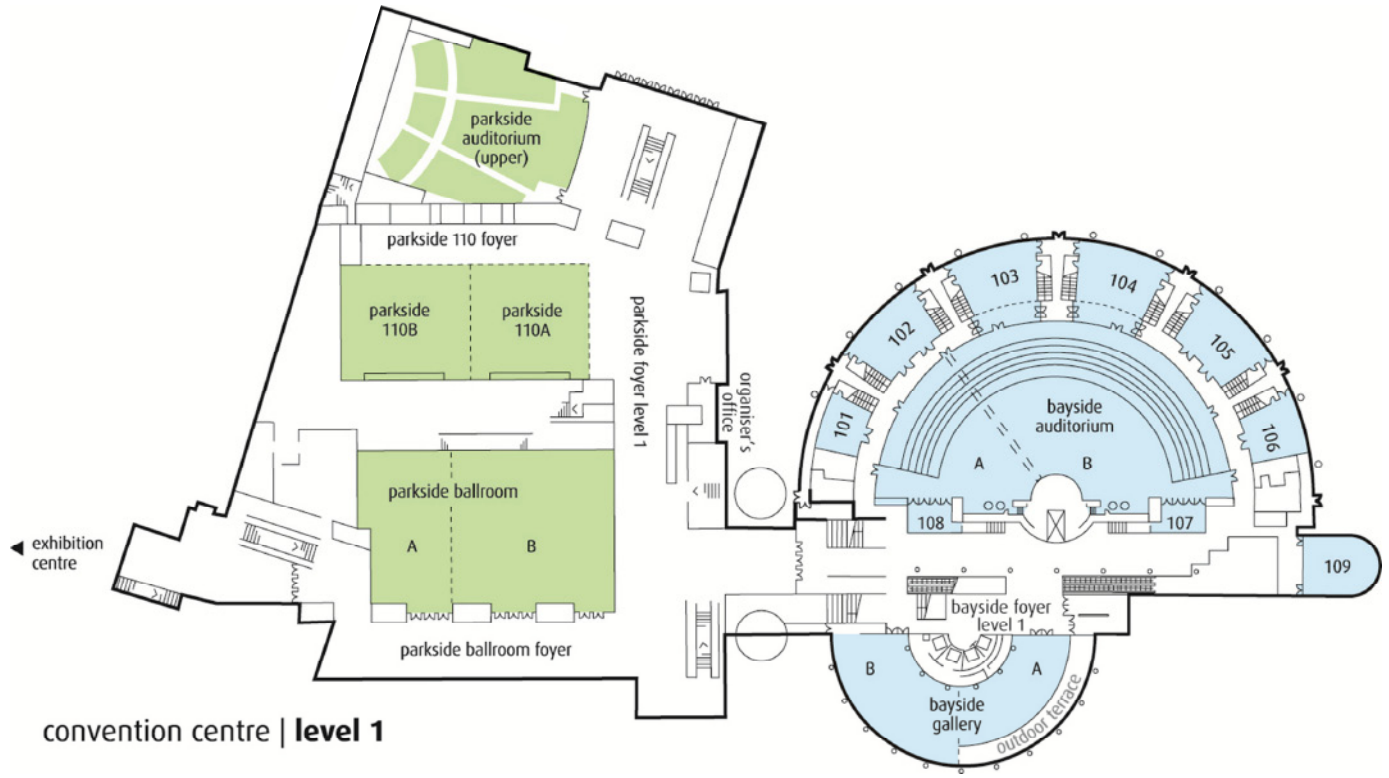


Convention Centre Map



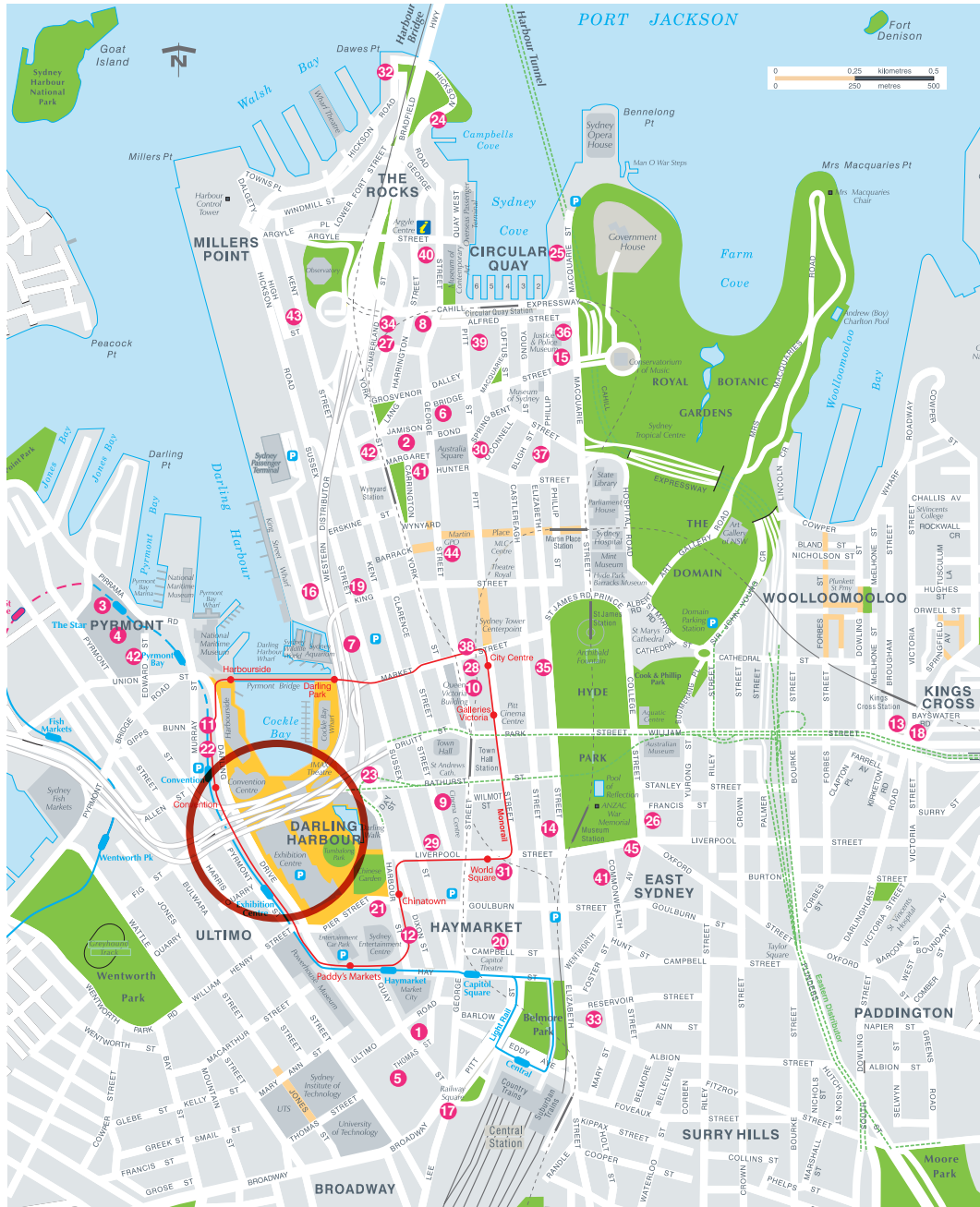


Convention Centre Map





Map of Sydney's Darling Harbour



SYDNEY CENTRAL BUSINESS DISTRICT

1. Aarons Hotel Sydney
2. Amora Hotel Jamison Sydney
3. Astral Residencies
4. Astral Towers
5. Citigate Central Sydney
6. Establishment Hotel Sydney
7. Four Points by Sheraton Darling Harbour Sydney
8. Four Seasons Hotel Sydney
9. Frasers Suites Sydney
10. Hilton Sydney
11. Hotel Ibis Darling Harbour
12. Holiday Inn Darling Harbour
13. Holiday Inn Potts Point
14. Hyde Park Inn
15. InterContinental Sydney
16. Medina Grand Harbourside
17. Mercure Sydney
18. Mercure Sydney Potts Points
19. Metro Apartments on Darling Harbour
20. Metro Hotel Sydney Central
21. Novotel Rockford Darling Harbour
22. Novotel Sydney on Darling Harbour
23. PARKROYAL Darling Harbour, Sydney
24. Park Hyatt Sydney
25. Pullman Quay Grand Sydney
26. Pullman Sydney Hyde Park
27. Quay West Suites Sydney
28. QT Sydney
29. Radisson Hotel and Suites Sydney
30. Radisson Blu Plaza Hotel Sydney
31. Rydges World Square
32. Sebel Pier One Sydney
33. Sebel Surry Hills Sydney
34. Shangri-La Hotel, Sydney
35. Sheraton On The Park
36. Sir Stamford at Circular Quay Hotel
37. Sofitel Sydney Wentworth
38. Swissôtel Sydney
39. Sydney Harbour Marriott at Circular Quay
40. The Harbour Rocks Hotel
41. The Menzies Sydney
42. The Darling Hotel and Spa
43. The Langham Sydney
44. The Westin Sydney
45. Y Hotel and Conference Centre, Sydney



MDS Awards

Honorary Membership Awards

The Honorary Membership Awards recognize individuals who have made extraordinary contributions to the field of Movement Disorders or otherwise to The *Movement Disorder Society*.

Sunday, June 16

Opening Ceremony

19:30 - 21:30

Location: Bayside Auditorium B



Joseph Jankovic, MD
Houston, TX, USA



John G. Nutt, MD
Portland, OR, USA

President's Distinguished Service Award

The President's Distinguished Service Award is given in recognition of long and distinguished service to The *Movement Disorder Society*.

Sunday, June 16

Opening Ceremony

19:30 - 21:30

Location: Bayside Auditorium B

Stanley Fahn Lecture

Wednesday, June 19 as part of 4103 Plenary Session IX: *The Presidential Lectures*

8:00 - 8:30

The Stanley Fahn Award Lecture was created to recognize an outstanding scholar and role-model clinician in the field of Movement Disorders. The selected lecturer must show evidence of exceptional contributions which have resulted in better understanding of the cause, diagnosis, or treatment of Movement Disorders, and have translated into meaningful improvements in the standard of clinical practice. The selected lecturer must demonstrate evidence of consistent dedication to Movement Disorders education and research.

The signs of a neurologist

Stanley Fahn Lecturer – Philip Thompson, MBBS (Adelaide), PhD (London), FRACP



Philip Thompson is the Professor of Neurology in the University Department of Medicine at the University of Adelaide and Head of the Department of Neurology at the Royal Adelaide Hospital.

Prof. Thompson trained in Adelaide, Perth and London. He developed his interest in Movement Disorders and the control of human movement under the guidance of the late Professor C. David Marsden at Kings College Hospital, the Institute of Psychiatry, the National Hospital for Neurology and Neurosurgery and the MRC Human Movement and Balance Unit, Queen Square. His research has focused on the physiology of motor control in normal subjects, the mechanisms of brain stimulation, and disorders of motor control in neurological disease, particularly movement disorders. He is also interested in the physiological basis of clinical signs in Neurology and the ways in which Neurologists recognize these signs.

Prof. Thompson has served on the International Executive Committee of The *Movement Disorder Society* for the last 14 years including as Secretary of The *Movement Disorder Society* from 2004-2006, President of The *Movement Disorder Society* from 2009-2011 and is currently serving as Past-President. He was Chair of the Asian and Oceanian Section of The *Movement Disorder Society* from 2005-2006. He served on the Council of the Australian Association of Neurologists from 2003-2009. He has served two terms on the International Editorial Board of the *Movement Disorders Journal*.

He also has published more than 300 articles and book chapters with special interest in the neurophysiology of motor control, movement disorders and gait.



MDS Awards

C. David Marsden Lecture

Wednesday, June 19 as part of 4103 Plenary Session IX: The Presidential Lecture
9:30 – 10:00

The C. David Marsden Lecture was created to recognize an outstanding scholar and inspiring neuroscientist in the field of Movement Disorders. The selected lecturer must show evidence of exceptional contributions which have resulted in better understanding of the neurobiology of Movement Disorders, and have translated into tangible improvements in clinical therapy and/or providing insight into normal brain function in the control of movement. The selected lecturer must demonstrate evidence of consistent dedication to Movement Disorder education and research.

Parkinson's Disease – The windmills of your mind

C. David Marsden Lecturer – Peter Jenner, B.Pharm(Hons), PhD, DSc, FRPharmS, FBPharmacol.S, FKC



Peter Jenner received his degree in Pharmacy from Chelsea College, University of London in 1967, followed by his PhD in 1970, during which time he studied the absorption, metabolism and distribution of tobacco alkaloids. Subsequently he was appointed Lecturer in Biochemistry in the Department of Neurology, Institute of Psychiatry and then Senior Lecturer in 1978. During this time, his research became completely re-orientated to the central nervous system and in particular to Parkinson's disease (PD) under the guidance of David Marsden. He worked on the drug treatment of PD using experimental models but also set up chronic models of neuroleptic treatment in relation their extrapyramidal side-effects, most notably tardive dyskinesia.

From 1985, Prof. Jenner was Reader in Neurochemical Pharmacology in the Department of Neurology, Institute of Psychiatry and King's College Hospital Medical School. In 1989, he was appointed to the Chair of Pharmacology at King's College London where he served as Professor of Pharmacology and Head of Department. From 1998-2004, he was Head of the Division of Pharmacology and Therapeutics at the newly created Guy's, King's and St. Thomas' School of Biomedical Sciences at King's College.

In 2008, he was made Emeritus Professor of Pharmacology at King's and he continues to undertake research and to publish on PD. In 1987, he was awarded a DSc from the University of London. He was elected a Fellow of: the Royal Pharmaceutical Society of Great Britain (1994); the British Pharmacological Society (2005); King's College London (2006); and the Royal Society of Medicine (2011). In 2005, he was made an Honorary Member of The Movement Disorder Society for his extraordinary contribution to the field of Movement Disorders.

Prof. Jenner has published more than 1,000 papers, review articles, book chapters and written or edited numerous monographs. He is an ISI Most Cited Author in Neuroscience, ranked in top 0.5% of all neuroscience authors in the world. He has served on numerous editorial boards and is currently Editor in Chief of *Synapse* and Series Editor for *International Reviews in Neurobiology*.

Junior Awards

Three Junior Award recipients have been selected based on their significant contribution to research in the field of Movement Disorders.

4103: Plenary Session IX: Presidential Lectureships

Wednesday, June 19

Chairs: Günther Deuschl, Matthew Stern

8:30-9:30

Alison Yarnall, MBBS

Newcastle upon Tyne, United Kingdom

Characterising mild cognitive impairment in incident Parkinson's disease: The ICICLE-PD Study

Alison J Yarnall, MBBS¹, David P Breen, MBChB², Gordon W Duncan, MBChB¹, Roger A Barker, PhD² and David J Burn, MA,MD,FRCP¹. ¹Institute for Ageing and Health, Newcastle University, Newcastle, United Kingdom, NE4 5PL and ²Cambridge Centre for Brain Repair, Cambridge University, Cambridge, United Kingdom

Objective: To describe the frequency of mild cognitive impairment in a cohort of newly diagnosed incident PD cases (PD-MCI).

Background: Dementia is a frequent debilitating complication of PD, with a cumulative incidence approaching 80% in community studies. The concept of PD-MCI has received increasing attention over recent years, with certain subtypes being associated with increased risk of dementia. Recently new diagnostic criteria to better characterise PD-MCI and its subtypes have been proposed. We report baseline cohort MCI data for ICICLE-PD, a prospective study which aims to determine predictors for dementia in PD.



MDS Awards

Methods: Between June 2009 and December 2011, participants with newly diagnosed PD and age-matched controls were invited to participate in clinical and neuropsychological assessments in Newcastle and Cambridge, UK. PD-MCI was defined using new Movement Disorder Society criteria. Subjects were classified as level 1 MCI if they scored less than 26 on the Montreal Cognitive Assessment and as level 2 if they were impaired on two tests in one cognitive domain or one impaired test in two different domains at 1, 1.5 or 2 standard deviations (SD) below normative values.

Results: 219 incident PD cases and 99 controls were included. 41.5% met the criteria for level 1 PD-MCI, and level 2 criteria were met by 65.8% of PD participants at 1 SD below normative values, 42.5% at 1.5 SD and 22.4 % at 2 SD. Among the five cognitive domains, memory impairment was the most common deficit in PD participants at 1.5 SD below normative values (15.1%), followed by visuospatial (13.2%), attention (12.3%) and then executive dysfunction (11.0%). When level 2 MCI criteria were applied at 1.5 SD, 12.8% were classified as non-amnesic single-domain MCI (naMCI-SD), 8.2% had amnesic multiple domain (aMCI-MD), 7.7% had aMCI-SD, and 5.0% were naMCI-MD.

Conclusions: In a large community-based representative cohort of incident PD, PD-MCI is common and may represent those at risk of developing dementia. Longitudinal assessment of these individuals will enable us to determine those measures predictive of PD dementia, allowing for future targeted early therapeutic interventions.

Mun Kyung Sunwoo, MD

Seoul, Korea

a-Synuclein pathology is related with postoperative delirium in patients undergoing gastrectomy

Mun Kyung Sunwoo, MD¹, Jin Yong Hong, MD¹, Hyun Jung Park, PhD², Se Hoon Kim, MD³ and Phil Hyu Lee, MD, PhD^{1,2}. ¹Neurology, Yonsei University college of Medicine, Seoul, Korea; ²Severance biomedical science Institute, Seoul, Korea and ³Pathology, Yonsei University college of Medicine, Seoul, Korea

Objective: We investigated the α -synuclein pathology in patients who experienced postoperative delirium after gastrectomy for stomach cancer.

Background: Although growing evidence suggests that postoperative delirium is associated with an increased risk of mortality, institutionalization following discharge, and the development of dementia, little is known about pathophysiology of delirium. The clinical characteristics of postoperative delirium are quite similar to core features of α -synuclein-related cognitive disorders, such as dementia with Lewy bodies or Parkinson's disease dementia. Based on the observation that postoperative delirium may represent a continuum of cognitive disorders, we hypothesized that postoperative delirium is indicative of underlying Lewy body pathology.

Methods: Patients with and without postoperative delirium were selected among patients undergoing total gastrectomy for primary gastric cancer from 2007 to 2011 (each n=16) at the university hospital. Immunohistochemical staining for α -synuclein of both normal and phosphorylated form was performed in the myenteric plexus. A logistic regression analysis was applied to identify independent predictors of postoperative delirium.

Results: No significant differences were observed for age, sex, operation time, or onset of delirium after total gastrectomy between patients with and without postoperative delirium. Patients with postoperative delirium had a higher frequency of intensive care unit (ICU) admissions (43.8 vs. 6.3%, p=0.037) and α -synuclein-positive pathologies of normal (56.3 vs. 12.5%, p=0.023) and phosphorylated form (43.8 vs. 6.3%, p=0.037) compared with those without postoperative delirium. A logistic regression analysis revealed that immunoreactivity for normal α -synuclein (odds ratio, 9.20) and intensive care unit admission (odds ratio, 11.97) were independently associated with postoperative delirium.

Conclusions: These results suggest that underlying α -synuclein pathologies in the stomach are associated with postoperative delirium, implying that postoperative delirium represents a preclinical stage of α -synuclein related with cognitive disorders.

Jee Young Lee, MD

Seoul, Korea

Dopaminergic neural changes and impulse control related behavior disorder in Parkinson's disease

Jee Young Lee, MD¹, Seong Ho Seo, MS², Yu Kyeong Kim, MD, PhD³, Jae Sung Lee, PhD² and Beom S Jeon, MD, PhD⁴. ¹Neurology, Seoul National University-Seoul Metropolitan Government Boramae Medical Center, SEOUL, Korea; ²Nuclear Medicine, Seoul National University College of Medicine, SEOUL, Korea; ³Nuclear Medicine, Seoul National University-Seoul Metropolitan Government Boramae Medical Center, SEOUL, Korea and ⁴Neurology, Seoul National University Hospital, College of Medicine, Seoul National University, SEOUL, Korea

Objective: To evaluate dopaminergic neural changes in the extrastriatal and striatal systems in relation to medication-related impulse control and related behavior disorders (ICB) in Parkinson's disease (PD).

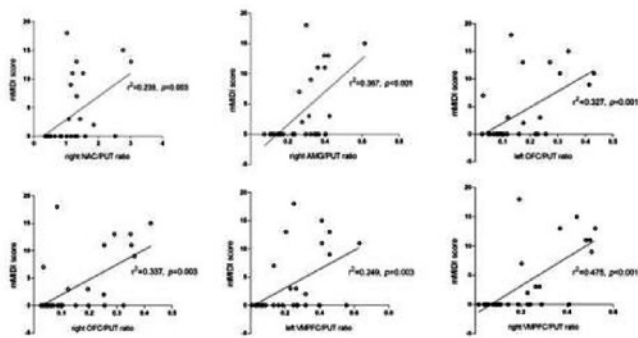
Methods: Method A total of 34 subjects (12 PD ICB, 12 PD non-ICB and 10 healthy controls) having no other co-morbid psychiatric disorders participated in this study. Each subject underwent dynamic N-(3-[¹⁸F]fluoropropyl)-2-carbomethoxy-3-(4-iodophenyl) nortropine ([¹⁸F]FP-CIT) positron emission tomography scans at the medication-off state. Binding potentials (BP) at the nucleus accumbens (NAC), amygdala (AMG), orbitofrontal cortex (OFC), ventromedial prefrontal



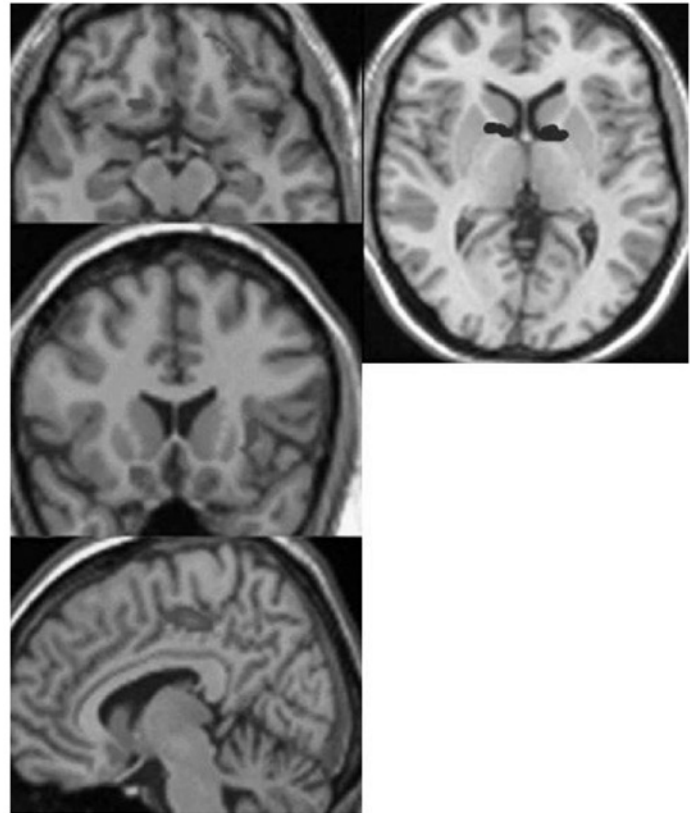
MDS Awards

cortex (VMPFC), putamen (PUT) and caudate nucleus (CAU), and whole brain parametric maps of [¹⁸F]FP-CIT binding were analyzed.

Results: The extrastriatal to striatal BP ratios were significantly higher in PD by about 3 times than that of the healthy controls. The BP ratios at the right VMPFC/PUT and AMG/PUT were significantly high in PD ICB than in non-ICB groups, and those at the right NAC/PUT and AMG/PUT, and both the VMPFC/PUTs and OFC/PUTs were correlated with the magnitude of ICB.



Parametric analysis of [¹⁸F]FP-CIT bindings normalized to the putaminal bindings showed higher BPs in the VMPFC, OFCs, insular, and posterior cingulate cortex whereas lower BPs were observed in the ventral pallidum in PD ICB when compared to non-ICB groups.



Conclusions: A great gap in extrastriatal versus striatal dopaminergic fiber degenerations is an intrinsic pathological condition in PD. This study suggests that relative dense dopaminergic projections to areas regarding reward sensitive decision making and interoceptive urges for addictive behaviors and paucity in projections to areas processing convergent signals from diverse rewards may be a neuropathological substrate of ICB in PD.



MDS Awards

2013 Travel Grants

Pankaj Agarwal*

Mumbai, India

Umer Akbar

Gainesville, FL, USA

Leonardo Almeida

Hoover, AL, USA

Jakkrit Amornvit

Bangkok, Thailand

Camila Aquino

Toronto, ON, Canada

David Arkadir

New York, NY, USA

Abolfazl Avan

Mashhad, Iran

Amit Batla

Ghaziabad, India

Miriam Batule Dominguez

Santa Clara, Cuba

Cynthia Bedeschi Ferrari

São Paulo, Brazil

Brian Berman

Denver, CO, USA

Josie-Anne Bertrand

Montreal, QC, Canada

Ketaki Bhalsing*

Bangalore, India

Gabriella Boschetti

Curitiba, Brazil

Robin Cash

Toronto, ON, Canada

Alvin Cenina

Manila, Philippines

Florence Chang

New York, NY, USA

Corina Christie

Capital Federal, Argentina

Florence Cormier

Paris, France

Alexander Crizzle

Toronto, ON, Canada

Belinda Crowe

London, United Kingdom

Rubens Cury

São Paulo, Brazil

Veronika Datieva

Moscow, Russia

Marie Y. Davis

Seattle, WA, USA

Paul De Roos

Uppsala, Sweden

Malgorzata Dec

Krakow, Poland

Aman Deep

Phoenix, AZ, USA

Sabrina Diab

Mont-Royal, QC, Canada

Aloysius Domingo

Lübeck, Germany

Kaylena Ehgoetz Martens

Waterloo, ON, Canada

Sheila R. Eichenseer

Chicago, IL, USA

Vindhya Ekanayake

West Lafayette, IN, USA

Roberto Erro

Napoli, Italy

Mariela Escande

Buenos Aires, Argentina

Alessandra Fanciulli

Innsbruck, Austria

Marina Farah

Curitiba, Brazil

Jori Fleisher

Philadelphia, PA, USA

Xiaoli Fu*

Guangzhou, China

Brook Galna

Newcastle upon Tyne, United Kingdom

Anna Gamaleya

Moscow, Russia

Hardeep Gambhir*

New Delhi, India

Florin Gandor

Berlin, Germany

Juan C. Giugni

Buenos Aires, Argentina

Aroma Agape Gopalai

Kuala Lumpur, Malaysia

Anne Grünewald

Lübeck, Germany

Jifeng Guo*

Changsha, China

Mohammad Habib*

Sobhanbag, Bangladesh

Jessica Hedeman

Denver, CO, USA

Angela Holmes

Bethesda, MD, USA

Alex Jahangirvand

Saskatoon, SK, Canada

Ketan Ramakant Jhunjhunwala

Bangalore, India

Onanong Jitkrisadukul*

Bangkok, Thailand

Lorraine V. Kalia

Toronto, ON, Canada

Suneil K. Kalia

Toronto, ON, Canada

Eleanna Kara

London, United Kingdom

Juyeon Kim*

Seoul, Korea

Okka Thea Kimmich

Dublin, Ireland

Florian Krismer

Innsbruck, Austria

Neeraj Kumar*

Barabanki, India

Pradeep Kumar

New Delhi, India



MDS Awards

Travis Larsh
Kent, OH, USA

Tanya Lin
Tucson, AZ, USA

Jose R. López-Castellanos
San Salvador, El Salvador

Audrey Maillet
Bron, France

Leslie C. Markun
San Francisco, CA, USA

Hector Ruben Martinez Hernandez
New York, NY, USA

Daniel Martinez-Ramierz
Gainesville, FL, USA

Jessica McCamish
Ventura, CA, USA

Raja Mehanna
Cleveland Heights, OH, USA

Tiago A. Mestre
Toronto, ON, Canada

Kulthida Methawasin
Nakornnayok, Thailand

Kelly Mills
San Francisco, CA, USA

Shahnaz Miri
Tehran, Iran

Jitendriya Mishra*
Chandigarh, India

Hugo Morales
Mexico City, Mexico

Nicolas Morin
Quebec City, QC, Canada

Mariana M. Moscovich
Parana, Brazil

Bogdan Neagu
Thornhill, ON, Canada

Zhen Ni
Toronto, ON, Canada

Srivadee Oravivattanakul
Cleveland Heights, OH, USA

Rafael Palacio*
Batangas, Philippines

Pattamon Panyakaew*
Bangkok, Thailand

Alexander Pentelyat
Philadelphia, PA, USA

Neepa Patel
Houston, TX, USA

Sitthi Petchrutchatachart
Nonthaburi, Thailand

Luiza G. Piovesana
Campinas, Brazil

Thomas Ragole
Denver, CO, USA

Gail Ramiro*
Quezon City, Philippines

Gesine Respondek
Munich, Germany

Lucia Ricciardi
Messina, Italy

Richard Salazar Montero
Baltimore, MD, USA

Mohit Saxena
New Delhi, India

Rebecca E. Schuele
Tübingen, Germany

Eva Schulte
Munich, Germany

Madeleine E. Sharp
New York, NY, USA

Leah L. Shiong Shu
Manila, Philippines

Fabienne S. Springer
Innsbruck, Austria

Jirada Sringean*
Nonthaburi, Thailand

Leena Subramanian Jr.
Cardiff, United Kingdom

Christine R. Swanson
Philadelphia, PA, USA

Ai Tan*
Kuala Lumpur, Malaysia

Dawn Tan*
Singapore

Sirinan Tazen
New York, NY, USA

Jill Trumble
Augusta, GA, USA

Bayasgalan Tserensodnom*
Ulaanbaatar, Mongolia

Kaviraja Udupa
Toronto, ON, Canada

Chizoba Umeh
Elliott City, MD, USA

Mwiza Ushe
St. Louis, MO, USA

Elena Vazey
Charleston, SC, USA

V.G. Veena*
New Delhi, India

Sarah Vercruyssen
Leuven, Belgium

Tuhin Virmani
New York, NY, USA

Romina Vuono
Cambridge, United Kingdom

Jeri Y. Williams
Birmingham, AL, USA

Simone Wolff
Lübeck, Germany

Gilad Yahalom
Tel-Hashomer, Israel

Farkhod Yunusov
Tashkent, Uzbekistan

Jinxia Zhou*
Beijing, China

Irina Zhukova
Tomsk, Russia

** 2013 Travel Grants sponsored by
The Movement Disorder Society - Asian and
Oceanian Section (MDS-AOS)*



Congress Session Definitions

Blue Ribbon Highlights:

This session will provide a critical review of the best poster presentations by a panel of experts, highlighting the relevance, novelty and quality of both clinical and basic research presented by the delegates.

Controversies:

This Plenary Session is designed to involve all International Congress attendees. Content is prepared to stimulate interest and debate among a panel of experts. Views from several angles will be addressed as discussion of pre-selected "hot" topics will be open for debate among the panelists.

Corporate Therapeutic Symposia:

These company-based informational sessions will provide attendees with non-CME educational opportunities to learn the latest in therapeutics.

Guided Poster Tours:

Guided Poster Tours will give small groups of delegates an opportunity to hear discussion on a select group of abstracts in several sub-categories.

Parallel Sessions:

These concurrent sessions provide an in-depth report of the latest research findings, state-of-the-art treatment options, as well as a discussion of future strategies. Parallel sessions will have evidence-based components and incorporate the "hot" issues in Parkinson's disease and other movement disorders.

Plenary Sessions:

These sessions provide a broad overview of the latest clinical and basic science research findings and state-of-the-art information.

Poster Sessions:

Poster sessions give each delegate an opportunity to view their colleagues' posters on the most current research in the field of Movement Disorders. Authors will be present for 1.5 hours each day to explain their work and answer questions.

Skills Workshops:

These clinic-based training sessions provide an educational illustration of clinical techniques and treatment procedures through demonstrations utilizing patient videotapes and proper equipment to further develop practitioners' skills and knowledge within the field of treatment of movement disorders.

Teaching Courses:

These educational programs provide up-to-date information focused on a single topic. The sessions highlight both the clinical and basic science of topics of relevance to Movement Disorder specialists. The sessions are unique in providing a syllabus that includes a review of the topic and the presentation slides. In addition, these programs provide ample time for questions and a discussion period at the conclusion of the presentations.

Therapeutic Plenary Sessions:


These sessions provide the latest information regarding the scientific and clinical evidence supporting treatment options for Parkinson's disease and other movement disorders.

Video Sessions:

Designed to provide a broad overview of related movement disorders, the video sessions will focus on the phenomenology covering the many different kinds of movement disorders affecting the population today.

Special Meeting Theme

Clinicopathological Correlations in Movement Disorders – From Bench to Bedside

At each annual International Congress, the Congress Scientific Program Committee selects a theme that is highlighted throughout the meeting. This year's theme, "Clinicopathological Correlations in Movement Disorders — From Bench to Bedside" will be showcased in two Plenary Sessions, eight Parallel Sessions, one Skills Workshop, one Teaching Course, and one Video Session. International experts will serve as faculty, and the meeting participants can elect to attend any or all of the sessions. These sessions are designated with a .



Program-at-a-Glance

	Sunday, June 16, 2013	Monday, June 17, 2013	Tuesday, June 18, 2013	Wednesday, June 19, 2013	Thursday, June 20, 2013
7:00	Committee Meetings 7:00 - 8:00	Committee Meetings 7:00 - 8:00	Committee Meetings 7:00 - 8:00	Committee Meetings 7:00 - 8:00	Committee Meetings 7:00 - 8:00
7:30					
8:00	Therapeutic Plenary Session I 8:00 - 10:00	Plenary Session V 8:00 - 10:00	Plenary Session VII 8:00 - 10:00	Plenary Session IX (Presidential Lectures) 8:00 - 10:00	Plenary Session XI 8:00 - 9:30
8:30					
9:00					Break 9:30 - 10:00
9:30					
10:00	Break 10:00 - 11:00	Break 10:00 - 10:30	Break 10:00 - 11:00	Break 10:00 - 10:30	Controversies 10:00 - 11:00
10:30	General Assemblies 10:00 - 11:00	Plenary Session VI 10:30 - 12:30		MDS Business Meeting 10:00 - 11:00	
11:00	Therapeutic Plenary Session II 11:00 - 13:00		Guided Poster Tours/ Poster Sessions 12:30 - 14:00	Plenary Session VIII 11:00 - 12:30	Guided Poster Tours/ Poster Sessions 12:00 - 13:30
11:30					
12:00		Corporate Therapeutic Symposia 12:00 - 13:00			
12:30	Guided Poster Tours/ Poster Sessions 13:00 - 14:30				
13:00		Break 13:00 - 14:30	Corporate Therapeutic Symposia 14:00 - 15:00	Corporate Therapeutic Symposia 13:30 - 14:30	Break 14:30 - 15:00
13:30					
14:00	Therapeutic Plenary Session III 14:30 - 16:30	Parallel Sessions/ Teaching Courses 15:30 - 17:30	Corporate Therapeutic Symposia 14:00 - 15:00	Break 15:00 - 15:30	Parallel Sessions/ Teaching Courses 15:00 - 17:00
14:30					
15:00					
15:30	Break 16:30 - 17:00	Parallel Sessions/ Teaching Courses 15:30 - 17:30	Break 15:00 - 15:30	Parallel Sessions/ Teaching Courses 15:00 - 17:00	Parallel Sessions/ Teaching Courses 15:00 - 17:00
16:00					
16:30	Therapeutic Plenary Session IV 17:00 - 19:00	Break 17:30 - 18:00	Break 17:30 - 18:00	Break 17:00 - 17:30	End
17:00					
17:30					
18:00	Skills Workshops/ Video Sessions 18:00 - 19:30	Skills Workshops/ Video Sessions 18:00 - 19:30	Skills Workshops/ Video Sessions 18:00 - 19:30	Skills Workshops/ Video Sessions 17:30 - 19:00	Skills Workshops/ Video Sessions 17:30 - 19:00
18:30					
19:00	Break 19:00 - 19:30	Break 17:30 - 18:00	Break 17:30 - 18:00	Break 17:00 - 17:30	Break 17:00 - 17:30
19:30					
20:00	Welcome Ceremony 19:30 - 21:30	Break 17:30 - 18:00	Break 17:30 - 18:00	Break 17:00 - 17:30	Break 17:00 - 17:30
20:30					
21:00	Welcome Ceremony 19:30 - 21:30	Break 17:30 - 18:00	Break 17:30 - 18:00	Break 17:00 - 17:30	Break 17:00 - 17:30
21:30					
22:00	Welcome Ceremony 19:30 - 21:30	Break 17:30 - 18:00	Break 17:30 - 18:00	Break 17:00 - 17:30	Break 17:00 - 17:30
22:30					

New! Science and Technology Pavilion
8:30 - 17:00 (Bayside 106)



Scan to learn more on our website!

Daily Schedule



Sunday, June 16, 2013

1105 Therapeutic Plenary Session I

Experimental therapeutics in hypo/hyperkinetic movement disorders

8:00 – 10:00

Location: Bayside Auditorium B

Chairs: Thomas Foltynie
London, United Kingdom
Werner Poewe
Innsbruck, Austria

8:00 What has been achieved in strategies to repair the brain in Parkinson's disease?

Stephane Palfi
Creteil, France

8:40 What has been achieved in strategies to repair the brain in Huntington's disease?

Thomas Freeman
Tampa, FL, USA

9:20 What are the future experimental therapies for movement disorders?

Thomas Foltynie
London, United Kingdom

At the conclusion of this session, participants should be better able to:

1. Assess the current status of experimental therapeutics in Parkinson's disease
2. Assess the current status of experimental therapeutics in Huntington's disease
3. Understand the new experimental therapeutics being considered for movement disorders

Recommended Audience: Basic scientists, Clinical academicians, Practitioners, Students/Residents/Trainees

AOS General Assembly

10:00 – 11:00

Location: Bayside Terrace
All delegates from Asia and Oceania are encouraged to attend.

ES General Assembly

10:00 – 11:00

Location: Bayside Gallery B
All delegates from Europe and North Africa are encouraged to attend.

PAS General Assembly

10:00 – 11:00

Location: Bayside Gallery A
All delegates from Central America, North America and South America are encouraged to attend.

1106 Therapeutic Plenary Session II

Deep Brain Stimulation: New developments

11:00 – 13:00

Location: Bayside Auditorium B

Chairs: Andres Lozano
Toronto, ON, Canada
Peter Silburn
Spring Hill, Australia

11:00 Pedunculopontine (PPN) Deep Brain Stimulation (DBS): Does it really work?

Elena Moro
Grenoble, France

11:40 Subthalamic nucleus (STN) DBS: The new target for primary dystonia

Jill Ostrem
San Francisco, CA, USA

12:20 DBS for behavioral disorders

Jean-Luc Houeto
Grenoble, France

At the conclusion of this session, participants should be better able to:

1. Evaluate the efficacy of PPN DBS for gait disorders
2. Compare outcome from STN DBS for dystonia with that of standard targets
3. Understand the role of DBS in the management of behavioral disorders

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

Supported by an unrestricted educational grant from Medtronic, Inc.

1107 Therapeutic Plenary Session III

Management of the Parkinson's disease journey

14:30 – 16:30

Location: Bayside Auditorium B

Chairs: Christopher Goetz
Chicago, IL, USA
Heinz Reichmann
Dresden, Germany

14:30 How close are we to individualized medicine for Parkinson's disease?

Beom Jeon
Seoul, Korea

1107 Therapeutic Plenary Session III, cont.

15:10 What is the best decision-tree for the management of Parkinson's disease?

Carl Clarke
Birmingham, United Kingdom

15:50 What to do when everything else has failed

Janis Miyasaki
Toronto, ON, Canada

At the conclusion of this session, participants should be better able to:

1. Recognize how therapeutic decisions and other practices can be tailored to the individual Parkinson's disease patient by the use of clinical and genetic information and discuss how the concept of patient-specific medical care applies to Parkinson's disease
2. Support informed treatment-decision options in the management of Parkinson's disease
3. Gain awareness of the benefits of palliative care and other therapeutic interventions for late stage Parkinson's disease patients

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

1108 Therapeutic Plenary Session IV

Therapeutic options for mood, cognition and psychosis in Parkinson's disease patients: Selectivity without side-effects

17:00– 19:00

Location: Bayside Auditorium B

Chairs: John Dalrymple-Alford
Christchurch, New Zealand
Marcelo Merello
Buenos Aires, Argentina

17:00 How to treat the anxious and depressed Parkinson's disease patient

Daniel Weintraub
Ardmore, PA, USA

17:40 How to treat the Parkinson's disease patient with cognitive impairment

Jennifer Goldman
Chicago, IL, USA

18:20 How to treat the Parkinson's disease patient with psychosis

Sergio Starkstein
Fremantle, Australia



Sunday, June 16, 2013

1108 Therapeutic Plenary Session IV, cont.

At the conclusion of this session, participants should be better able to:

1. Understand the issues involved in selecting the best options for treating mood disorders in Parkinson's disease
2. Review the drugs available for treating cognitive impairment in Parkinson's disease
3. Evaluate treatments available for reducing psychosis in Parkinson's disease without worsening motor symptoms

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

Supported by an unrestricted educational grant from UCB Pharma SA.

Welcome Ceremony

19:30 – 21:30

Location: Bayside Auditorium B





Monday, June 17, 2013

2103 Plenary Session V 

Clinicopathological correlations in Parkinson's disease

8:00 – 10:00

Location: Bayside Auditorium B

Chairs: Stanley Fahn
New York, NY, USA

Andrew Lees
London, United Kingdom

8:00 Ante-mortem diagnosis of Parkinson's disease

Andrew Lees
London, United Kingdom

8:40 The natural history of Parkinson's disease

Mariese Anne Hely
Bowral, Australia

9:20 Neuropathological correlations of motor and non-motor symptoms in Parkinson's disease

Peter Kempster
Clayton, Australia

At the conclusion of this session, participants should be better able to:

1. Understand the main challenges in accurate ante-mortem diagnosis of Parkinson's disease
2. Understand the natural history of Parkinson's disease in the modern era
3. Understand the neuropathological correlates of motor and non-motor symptoms in Parkinson's disease

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

2104 Plenary Session VI

Emerging concepts in dystonia
10:30 – 12:30

Location: Bayside Auditorium B

Chairs: Alberto Albanese
Milan, Italy
James Lance
Sydney, Australia

10:30 What is dystonia? What's new in the pathophysiology of motor and non-motor aspects of dystonia?

Mark Hallett
Bethesda, MD, USA

11:10 Revising our classification of dystonia

Alberto Albanese
Milan, Italy

2104 Plenary Session VI, cont.

11:50 The unraveling of paroxysmal dyskinesia

Kailash Bhatia
London, United Kingdom

At the conclusion of this session, participants should be better able to:

1. Use the new definition of dystonia and understand the physiology underlying the phenomenology
2. Understand how to classify patients with dystonia
3. Gain awareness of how recent genetic discoveries have improved our clinical and pathophysiological understanding of the paroxysmal dyskinesias (kinesigenic, exertional and non-kinesigenic)

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

Poster Session 1

12:30 – 14:00

Location: Exhibition Hall 5

Poster viewing 9:00 – 18:00

Abstract numbers 1 – 330

Abstract Topics:

Dystonia
Gene Therapies and Cell-based Therapies
Neuroimaging
Parkinson's disease: Dysautonomia
Parkinson's disease: Electrophysiology
Parkinson's disease: Quality of Life/Care-giver burden
Parkinson's disease: Rating scales
Rating scales

Guided Poster Tours

GPT 1: Basic Science

12:30 – 14:00

Location: Bayside Gallery A

Leader: Anthony Schapira
London, United Kingdom

GPT 2: Parkinson's disease: Behavioral disorders

12:30 – 14:00

Location: Bayside Gallery B

Leaders: Hubert Fernandez
Cleveland, OH, USA
Daniel Weintraub
Ardmore, PA, USA

Supported by an unrestricted educational grant from UCB Pharma SA.

Guided Poster Tours, cont.

GPT 3: Parkinson's disease: Neuro-pharmacology

12:30 – 14:00

Location: Bayside 201-203

Leaders: Mark Guttman
Markham, ON, Canada
Cristina Sampaio
Princeton, NJ, USA

GPT 4: Sleep disorders and RLS

12:30 – 14:00

Location: Bayside 204

Leader: K. Ray Chaudhuri
London, United Kingdom

Supported by an unrestricted educational grant from UCB Pharma SA.

Corporate Therapeutic Symposia

14:00 – 15:00

Please see pages 62-63 for more information.

2206 Parallel Session  

Inclusions in Parkinson's disease: The link between pathology and molecular biology

15:30 – 17:30

Location: Bayside Auditorium A

Chairs: Glenda Halliday
Randwick, Australia
Yoshikuni Mizuno
Tokyo, Japan

15:30 What do monogenic forms of Parkinson's disease tell us about IPD?

Tamas Revesz
London, United Kingdom

16:10 GWAS and pathology: How are they connected?

Tatsushi Toda
Kobe, Japan

16:50 Is the Lewy body telling us anything useful about the pathogenesis of Parkinson's disease?

Glenda Halliday
Randwick, Australia



Monday, June 17, 2013

Daily Schedule
Monday

2206 Parallel Session , cont.

At the conclusion of this session, participants should be better able to:

1. Understand the pathology found in Mendelian forms of Parkinson's disease and its implications for the more common sporadic IPD
2. Understand how genetic risks for Parkinson's disease in a population relate to the neuropathology and inclusions found in patients
3. Understand how the study of the Lewy body gives a profound insight into the pathogenesis of Parkinson's disease

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

2207 Parallel Session

The basal ganglia in health and disease

15:30 – 17:30

Location: Parkside Ballroom A

- Chairs: José Obeso
Pamplona, Spain
John Rothwell
London, United Kingdom

15:30 New methods to shed light on the basal ganglia

J. Paul Bolam
Oxford, United Kingdom

16:10 Basal ganglia in health

John Rothwell
London, United Kingdom

16:50 Basal ganglia in disease

José Obeso
Pamplona, Spain

At the conclusion of this session, participants should be better able to:

1. Understand the concepts of novel methods now available for investigating basal ganglia function
2. Understand the normal functions of the basal ganglia
3. Discuss how basal ganglia dysfunction leads to hypo and hyper kinetic movement disorders

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

2208 Parallel Session

Impulsivity, addiction and reward mechanisms in movement disorders

15:30 – 17:30

Location: Parkside Ballroom B

- Chairs: Andrew Evans
Hawthorn, Australia
Antonio Strafella
Toronto, ON, Canada

15:30 The pathophysiology of impulsivity and addiction

Anthony Grace
Pittsburgh, PA, USA

16:10 In vivo models of impulsivity and addiction

Thilo Van Eimergen
Kiel, Germany

16:50 Clinical overview of ICDs, DDS and related disorders

Andrew Evans
Hawthorn, Australia

At the conclusion of this session, participants should be better able to:

1. Recognize the anatomical basis of impulsivity, addiction and parallels with other forms of addiction
2. Understand the animal models of impulsivity and addiction
3. Recognize the clinical features of impulse control disorders and DDS in movement disorders

Recommended Audience: Basic scientists, Clinical academicians, Students/Residents/Trainees

2209 Parallel Session

Racial and socioeconomic disparities in Parkinson's disease diagnosis, treatment and clinical outcomes

15:30 – 17:30

Location: Bayside Gallery A

- Chairs: Nicté Mejía
Somerville, MA, USA
Lisa Shulman
Baltimore, MD, USA

15:30 Racial disparities

Nabila Dahodwala
Philadelphia, PA, USA

16:10 Socioeconomic disparities

Nicté Mejía
Somerville, MA, USA

2209 Parallel Session , cont.

16:50 Geographic disparities

Catherine Dotchin
North Shields, United Kingdom

At the conclusion of this session, participants should be better able to:

1. Understand racial and socioeconomic differences in Parkinson's disease diagnosis
2. Discuss the impact of race and socioeconomic factors on Parkinson's disease treatment and clinical outcomes
3. Gain awareness of possible clinical interventions to address racial and socioeconomic disparities in Parkinson's disease diagnosis, treatment and clinical outcomes

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

2210 Parallel Session

Movement disorders associated to auto-antibodies

15:30 – 17:30

Location: Bayside 204

- Chairs: Francisco Cardoso
Belo Horizonte, Brazil
Russell Dale
Sydney, Australia

15:30 Are movement disorders associated with anti-basal ganglia antibodies?

Russell Dale
Sydney, Australia

16:10 Movement disorders associated with anti-NMDAR antibodies

Thomas Kimber
Adelaide, Australia

16:50 Movement disorders associated with novel antibodies

Sarosh Irani
Oxford, United Kingdom

At the conclusion of this session, participants should be better able to:

1. Recognize the movement disorders associated with anti-basal ganglia, anti-NMDAR and glycine-receptor antibodies
2. Discuss the mechanisms underlying movement disorders associated to auto-antibodies
3. Propose management strategies for movement disorders associated to auto-antibodies

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees



Monday, June 17, 2013

2211 Parallel Session **TICKET**

Invasive therapies in Parkinson's disease: Optimization and complications

15:30 – 17:30

Location: Bayside 201-203

Chairs: Angelo Antonini
Venice, Italy
Per Odin
Bremerhaven, Germany

15:30 Apomorphine therapy

Tove Henriksen
Copenhagen, Denmark

16:10 Levodopa infusion therapy

Angelo Antonini
Venice, Italy

16:50 Deep Brain Stimulation

Vincent Mok
Shatin, China

At the conclusion of this session, participants should be better able to:

1. Describe apomorphine infusion therapy with focus on critical factors for reaching optimal effect and management of the most common complications and side effects
2. Review levodopa infusion therapy with focus on critical factors for reaching optimal effect and management of the most common complications and side effects
3. Evaluate Deep Brain Stimulation with focus on critical factors for reaching optimal effect and management of the most common complications and side effects

Recommended Audience: Basic scientists, Clinical academicians, Practitioners, Students/Residents/Trainees

2308 Teaching Course **TICKET**

Movement disorders and epilepsy

15:30 – 17:30

Location: Bayside Gallery B

Chairs: Sam Berkovic
Heidelberg West, Australia
Carlo Colosimo
Rome, Italy

15:30 The relationship between myoclonus and epilepsy: New insights from neurophysiological and genetic studies in myoclonus dystonia and familial cortical tremor

Akio Ikeda
Kyoto, Japan

16:10 The relationship between paroxysmal dyskinesia and epilepsy: Lessons from recent genetic advances

Ingrid Scheffer
Melbourne, Australia

16:50 Update on the diagnosis and genetics of the progressive myoclonic epilepsies

Sam Berkovic
Heidelberg West, Australia

At the conclusion of this session, participants should be better able to:

1. Understand the relationship between myoclonus and epilepsy
2. Recognize the clinical and genetic overlap between paroxysmal movement disorders (especially the paroxysmal dyskinesias) and epilepsy
3. Learn an approach to the differential diagnosis and investigation of a patient with the syndrome of progressive myoclonic epilepsy and/or progressive myoclonic ataxia

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

2309 Teaching Course **TICKET**

Biomarkers for early Parkinson's disease

15:30 – 17:30

Location: Bayside Terrace

Chairs: Charles Adler
Scottsdale, AZ, USA
Daniela Berg
Tübingen, Germany

2309 Teaching Course **TICKET**, cont.

15:30 Clinical biomarkers

Charles Adler
Scottsdale, AZ, USA

16:10 Genetic, biochemical and tissue biomarkers

Pascal Derkinderen
Nantes, France

16:50 Imaging biomarkers

Klaus Seppi
Innsbruck, Austria

At the conclusion of this session, participants should be better able to:

1. Recognize the importance of the pre-motor phase of Parkinson's disease and to understand how to evaluate these non-motor symptoms
2. Review the genetic, biochemical (CSF and blood), and tissue bio-markers that are associated with Parkinson's disease
3. Describe the spectrum of neuroimaging methods that may be used to diagnose early Parkinson's disease and to understand their limitations

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

2403 Skills Workshop **TICKET**

Next generation genetics for clinicians

18:00 – 19:30

Location: Parkside Ballroom A

In this interactive session, participants will be better able to interpret the results obtained with new generation genetic methods and understand recent and future developments in disease genetics.

Thomas Gasser
Tübingen, Germany
Nicholas Wood
London, United Kingdom

At the conclusion of this session, participants should be better able to:

1. Provide an overview of recent and future developments in disease genetics, and opportunities associated with these methods
2. Enable critical review of publications that use next generation genetic methods
3. Discuss the likely long term implication of these methods for clinical diagnosis and treatment

Recommended Audience: Basic scientists, Clinical academicians, Practitioners



Monday, June 17, 2013

Daily Schedule
Monday

2404 Skills Workshop

The use of rating scales for hyperkinetic disorders in clinical practice

18:00 – 19:30

Location: Bayside Gallery A

In this interactive session, participants will be better able to recognize the attributes and performance of the most relevant rating scales for evaluation of such disorders as dystonia, chorea, and other hyperkinetic disorders in clinical practice. Evidence favoring the preferential selection of measures for different applications will be discussed.

Carlo Colosimo
Rome, Italy

Cynthia Comella
Chicago, IL, USA

At the conclusion of this session, participants should be better able to:

1. Recognize the characteristics of the most relevant rating scales for evaluation of hyperkinetic disorders
2. Understand the correct application and interpretation of these scales in clinical practice
3. Choose the most appropriate measure for assessment of the specific hyperkinetic movement according to the needs and circumstances in which they will be applied

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

2405 Skills Workshop

Eye movements and movement disorders

18:00 – 19:30

Location: Bayside Gallery B

In this interactive session, participants will be better able to recognize the most frequent eye movement disorders and learn how to examine them.

Tim Anderson
Christchurch, New Zealand

R. John Leigh
Cleveland, OH, USA

2405 Skills Workshop , cont.

At the conclusion of this session, participants should be better able to:

1. Describe the most appropriate tests in movement disorders and understand the underlying functional systems
2. Identify eye movement abnormalities in disease of cerebellum
3. Identify oculomotor syndromes in extrapyramidal disorders

Recommended Audience: Basic scientists, Clinical academicians, Practitioners, Students/Residents/Trainees

2406 Skills Workshop

Movement disorders in mitochondrial diseases: A practical approach

18:00 – 19:30

Location: Parkside Ballroom B

In this interactive session, participants will be better able to appreciate the spectrum of movement disorders that can occur in patients with a mitochondrial disease, and to discuss the practical diagnostic and therapeutic management of such patients.

Anthony Schapira
London, United Kingdom

Carolyn Sue
Sydney, Australia

At the conclusion of this session, participants should be better able to:

1. Appreciate the spectrum of movement disorders that can occur in patients with a mitochondrial disease
2. Summarize the diagnostic options that are available to diagnose mitochondrial diseases
3. Discuss the existing and experimental management options for patients with mitochondrial diseases

Recommended Audience: Basic scientists, Clinical academicians, Practitioners, Students/Residents/Trainees

2407 Skills Workshop

How to develop and run a brain bank

18:00 – 19:30

Location: Bayside Terrace

In this interactive session, the faculty will review the objectives and relevancy of brain banks in the field of movement disorders. Faculty will also address questions related with the registry of clinical data, recruitment of participants and the technical details of processing brains donated for research and the ethical principles safeguarding the running of a brain bank.

Dennis Dickson
Jacksonville, FL, USA

Jillian Kril
Sydney, Australia

At the conclusion of this session, participants should be better able to:

1. Describe the main structure of a brain bank
2. Recognize the technicalities in collecting, storing, and distributing brain and other tissues for research
3. Discuss the contribution of brain banks to progress in movement disorders

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

2508 Video Session

Unusual presentation of common movement disorders

18:00 – 19:30

Location: Bayside Auditorium A

In this interactive session, participants will be better able to recognize the spectrum of unusual presentations of common movement disorders, and to discuss the practical diagnostic work-up in such patients.

Alberto Espay
Cincinnati, OH, USA

Evzen Ruzicka
Prague, Czech Republic

At the conclusion of this session, participants should be better able to:

1. Recognize the spectrum of unusual presentations of common movement disorders



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2508 Video Session **TICKET**, cont.

2. Appreciate that unusual presentations of common movement disorders are much more common than typical presentations of unusual movement disorders
3. Discuss the practical diagnostic work-up in patients with an unusual presentation of a common movement disorder

Recommended Audience: Clinical academicians, Practitioners, Students/Residents/Trainees

2509 Video Session **TICKET**

Metabolic disorders: A frequently neglected or unrecognized cause of movement disorders

18:00 – 19:30

Location: Bayside 204

In this interactive session, participants will be better able to identify and recognize movement disorders caused by neurometabolic diseases in both children and adults, and the contributions of neuroimaging to their diagnosis.

Hyder Jinnah
Atlanta, GA, USA
Manju Kurian
London, United Kingdom

2509 Video Session **TICKET**, cont.

At the conclusion of this session, participants should be better able to:

1. Identify characteristic movement disorders and syndromes that indicate underlying neurometabolic diseases in adulthood
2. Recognize neurometabolic diseases that cause movement disorders in childhood
3. Interpret and describe typical imaging findings that point to a neurometabolic cause of movement disorders

Recommended Audience: Basic scientists, Clinical academicians, Practitioners

2510 Video Session **TICKET**

Movement disorders in Asia-Oceania

18:00 – 19:30

Location: Bayside 201-203

In this interactive session, participants will be better able to understand spectrum, presentation, phenomenology, and management of movement disorders that occur more commonly in the Asia-Oceania region.

Lillian Lee
Quezon City, Philippines
Hidehiro Mizusawa
Tokyo, Japan

2510 Video Session **TICKET**, cont.

At the conclusion of this session, participants should be better able to:

1. Describe the spectrum of genetic and non-genetic causes of movement disorders that commonly occur in the Asia and Oceania region
2. Recognize the clinical presentation and phenomenology of movement disorders that are common in the region
3. Discuss the management of these movement disorders

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees





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3103 Plenary Session VII

The pathophysiology of hyperkinetic movement disorders

8:00 – 10:00

Location: Bayside Auditorium B

Chairs: David Brooks
London, United Kingdom
Ryuji Kaji
Tokushima City, Japan

8:00 Lessons learned from neurophysiology

Robert Chen
Toronto, ON, Canada

8:40 Insights from functional imaging

David Brooks
London, United Kingdom

9:20 What has neuropathology taught us about hyperkinetic movement disorders?

Jean Paul Vonsattel
New York, NY, USA

At the conclusion of this session, participants should be better able to:

1. Describe how neurophysiological studies improve our understanding of hyperkinetic movement disorders
2. Understand the anatomical and functional networks underlying hyperkinetic movement disorders
3. Understand the neuropathological correlations of hyperkinetic disorders

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

Science and Technology Pavilion

8:30 – 17:00

Please see page 62 for more information.

MDS Business Meeting

10:00 – 11:00

Location: Bayside Gallery B
Open to all delegates

3104 Plenary Session VIII

Clinical trials in movement disorders: Where do we stand?

11:00 – 12:30

Location: Bayside Auditorium B

3104 Plenary Session VIII, cont.

Chairs: Susan Fox
Toronto, ON, Canada
Anthony Schapira
London, United Kingdom

11:00 Therapeutics update on Parkinson's disease

Susan Fox
Toronto, ON, Canada

11:30 Therapeutics update on non-Parkinson's disease hypokinetic

Günter Höglinger
Munich, Germany

12:00 Therapeutics update on hyperkinetic disorders and ataxia

Ludger Schöls
Tübingen, Germany

At the conclusion of this session, participants should be better able to:

1. Review recent advances in the pharmacological therapy of Parkinson's disease
2. Provide an update on the progress of therapeutic interventions for hypokinetic disorders other than Parkinson's disease
3. Give an overview of new therapeutic options in ataxia and Huntington's disease

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

Supported by an unrestricted educational grant from Merck & Co., Inc.

Poster Session 2

12:30 – 14:00

Location: Exhibition Hall 5

Poster viewing: 9:00 – 18:00

Abstract numbers: 331 – 665

Abstract Topics:

Parkinson's disease: Behavioral disorders

Parkinson's disease: Clinical Trials

Parkinson's disease: Cognition

Parkinson's disease: Neuropharmacology

Parkinson's disease: Sleep disorders

Restless legs syndrome

Tics/Stereotypies

Guided Poster Tours

GPT 5: Dystonia

12:30 – 14:00

Location: Bayside Gallery A

Leaders: Alberto Albanese
Milan, Italy
Susane Schneider
Keil, Germany

GPT 6: Parkinsonisms (parkinson plus and secondary)

12:30 – 14:00

Location: Bayside Gallery B

Leaders: Tove Henriksen
Copenhagen, Denmark
Günter Höglinger
Munich, Germany

GPT 7: Rating scales and assessment tools

12:30 – 14:00

Location: Bayside 201-203

Leaders: Christopher Goetz
Chicago, IL, USA
Cristina Sampaio
Princeton, NJ, USA

GPT 8: Surgical therapy: Parkinson's disease

12:30 – 14:00

Location: Bayside 204

Leaders: Paul Krack
Gronoble, France
Jens Volkman
Wurzburg, Germany

Corporate Therapeutic Symposia

14:00 – 15:00

Please see pages 62-63 for more information.

3207 Parallel Session

TICKET

Corticobasal syndrome: Clinical, neuroanatomical and genetic perspectives

15:30 – 17:30

Location: Bayside 201-203

Chairs: Anthony Lang
Toronto, ON, Canada
Irene Litvan
La Jolla, CA, USA



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3207 Parallel Session  , cont.**15:30 CBS features that predict the underlying pathologies**

Helen Ling
London, United Kingdom

16:10 Accuracy in diagnosing CBD: Newly proposed clinical diagnostic criteria

Melissa Armstrong
Baltimore, MD, USA

16:50 Genotype/Phenotype in CBS

Adam Boxer
San Francisco, CA, USA

At the conclusion of this session, participants should be better able to:

1. Identify CBS features that may best predict underlying cortical pathology
2. Learn newly developed clinical diagnostic criteria for CBD
3. Understand the role of genetics in the development of the various pathologies that present with a CBS

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

3208 Parallel Session  , cont.**The mysteries of dopamine in health and disease****15:30 – 17:30**

Location: Bayside 204

Chairs: Yves Agid
Paris, France
D. James Surmeier
Chicago, IL, USA

15:30 How does dopamine control motor function work in the normal brain?

D. James Surmeier
Chicago, IL, USA

16:10 Dopamine deficiency at different ages: From dystonia to parkinsonism: Why?

Joel Perlmutter
St. Louis, MO, USA

16:50 Dopamine beyond movement

Yves Agid
Paris, France

At the conclusion of this session, participants should be better able to:

1. Understand the role of dopamine in motor control
2. Describe the extent of dopamine pathology in untreated and treated Parkinson's disease

3208 Parallel Session  , cont.

3. Discuss the extent to which abnormalities in dopamine cause different movement disorders at different ages

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

3209 Parallel Session  , cont.**Challenging the experts: Movement disorders clinicopathological correlations****15:30 – 17:30**

Location: Bayside Auditorium B

In this session, four experienced movement disorders specialists will take the audience through a clinical case with video documentation in order to highlight how they interpret the history and signs in patients with complex movement disorders. Following the clinical discussion, expert neuropathologists will demonstrate the key pathological findings, both the diagnostic features and those features of particular pertinence to the clinical phenomenology of the case. This session will highlight the importance of clinicopathological correlation in helping to understand the relationships between brain structure and function, and pathological change in the brain and disease.

Chairs: Victor Fung
Westmead, Australia
Glenda Halliday
Randwick, Australia

MDS Panel of Experts:
Francisco Cardoso
Belo Horizonte, Brazil
Timothy Lynch
Dublin, Ireland
Barry Snow
Auckland, New Zealand
Eduardo Tolosa
Barcelona, Spain

3209 Parallel Session  , cont.

Neuropathologists:
Dennis Dickson
Jacksonville, FL, USA
Janice Holton
London, United Kingdom
Tamas Revesz
London, United Kingdom
Jean Paul Vonsattel
New York, NY, USA

At the conclusion of this session, participants should be better able to:

1. Understand the relationship between movement disorder symptoms and signs and the location of cerebral pathology
2. Enhance knowledge of clinicopathological correlations in unusual movement disorder syndromes
3. Learn how experts use clinical history and signs to formulate their diagnosis in complex movement disorder cases

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

3210 Parallel Session  , cont.**What's new in Huntington's disease?****15:30 – 17:30**

Location: Parkside Ballroom A

Chairs: Elizabeth McCusker
Westmead, Australia
Cristina Sampaio
Princeton, NJ, USA

15:30 Biomarkers of prodromal Huntington's disease

Ralf Reilmann
Münster, Germany

16:10 From pathophysiology to new treatment strategies: Insights from the laboratory and animal models

Michael Levine
Los Angeles, CA, USA

16:50 Update on symptomatic and disease modifying treatments

Cristina Sampaio
Princeton, NJ, USA

At the conclusion of this session, participants should be better able to:

1. Discuss the pathology and bio-markers of pre-manifest Huntington's disease gene carriers
2. Assess the contribution of preclinical research to understand pathophysiology and to study new treatment strategies in Huntington's disease



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Daily Schedule
Tuesday

3210 Parallel Session **TICKET**, cont.

- Describe current achievements in and future options for the treatment of Huntington's disease

Recommended Audience: Basic scientists, Clinical academicians, Practitioners, Students/Residents/Trainees

Supported by an unrestricted educational grant from Lundbeck U.S.

3211 Parallel Session **TICKET**

Thinking about cognitive dysfunction in Parkinson's disease: How do we define it and can we model it?

15:30 – 17:30

Location: Parkside Ballroom B

- Chairs:
- Paolo Barone
Naples, Italy
 - Robert Rodnitzky
Iowa City, IA, USA

15:30 Neurotransmitters and cognitive impairment in Parkinson's disease

Benedicte Ballanger
Bron, France

16:10 Animal models of cognitive dysfunction of Parkinson's disease

Jay Schneider
Philadelphia, PA, USA

16:50 Defining mild cognitive impairment in Parkinson's disease

Paolo Barone
Naples, Italy

At the conclusion of this session, participants should be better able to:

- Understand definition of cognitive dysfunction in Parkinson's disease
- Differentiate between different subtypes of cognitive dysfunction in Parkinson's disease
- Understand how to detect Parkinson's disease cognitive dysfunction clinically

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

3212 Parallel Session **TICKET**

Update on disturbances of sleep-wakefulness and movement disorders

15:30 – 17:30

Location: Bayside Gallery A

- Chairs:
- Simon Lewis
Sydney, Australia
 - Wolfgang Oertel
Marburg, Germany

15:30 How to approach and manage patients with periodic or rhythmic movements during rest, drowsiness and sleep

Birgit Frauscher
Innsbruck, Austria

16:10 From dream-enacting behavior to synuclein in the brain: REM sleep behavior disorder as an early feature of synucleinopathies

Simon Lewis
Sydney, Australia

16:50 Why is my Parkinson's disease patient sleepy? And how shall I treat him?

Wolfgang Oertel
Marburg, Germany

At the conclusion of this session, participants should be better able to:

- Identify and manage rhythmic or periodic movement disorders before or during sleep including restless legs syndrome, periodic movements of sleep and others such as hypnic jerks, head banging, body rocking and stereotypies
- Describe the clinical, polysomnographic and pathophysiological features of RBD pointing to its association as an early feature of a neurodegenerative disease and particularly an evolving synucleinopathy
- Explain the mechanisms, the diagnostic workup and management of daytime sleepiness in Parkinson's disease

Recommended Audience: Clinical academicians, Practitioners, Students/Residents/Trainees

3213 Parallel Session **TICKET**

Nursing and allied health-care for Parkinson's disease: Practice-based evidence or evidence-based practice?

15:30 – 17:30

Location: Bayside 103

- Chairs:
- Colleen Canning
Sydney, Australia
 - Lindy Clemson
Lidcombe, Australia

15:30 Outcomes of physiotherapy for Parkinson's disease: New evidence from large randomized clinical trials

Colleen Canning
Sydney, Australia

16:10 Nursing interventions for Parkinson's disease: More than practice-based evidence?

Julie Carter
Portland, OR, USA

16:50 Other allied health interventions in Parkinson's disease

Ana Aragon
Bath, United Kingdom

At the conclusion of this session, participants should be better able to:

- Have a state-of-the-art view of the latest scientific developments in allied healthcare for Parkinson's disease, including new evidence from large RCT's, evidence-based practice guidelines and other important progress in the field
- Appreciate the broad spectrum of treatment approaches offered by allied health professionals and Parkinson nurse specialists, and understand the current level of scientific evidence that supports these various interventions
- Understand the range of impairments, disabilities and activity limitations in Parkinson's disease

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees



Tuesday, June 18, 2013

3314 Teaching Course **TICKET**

Movement disorders emergencies

15:30 – 17:30

Location: Bayside Terrace

Chairs: K. Ray Chaudhuri
London, United Kingdom

Louis Tan
Singapore

15:30 Emergencies in hypokinetic disorders

Renato Puppi Munhoz
Curitiba, Brazil

16:10 Emergencies in hyperkinetic disorders

Steven Frucht
New York, NY, USA

16:50 Emergencies in surgically treated movement disorders patients

Rianne Esselink
Nijmegen, Netherlands

At the conclusion of this session, participants should be better able to:

1. Recognize and define management strategies for neuroleptic malignant syndrome, parkinsonism hyperpyrexia syndrome, and serotonin syndrome
2. Recognize and define management strategies for status dystonicus, acute dystonic reaction, and selected causes of acute choreas, myoclonus, and tics
3. Recognize and define management strategies for emergent complications in DBS-treated patients with movement disorders

Recommended Audience: Clinical academicians, Practitioners, Students/Residents/Trainees

3315 Teaching Course **TICKET**

DBS in movement disorders

15:30 – 17:30

Location: Bayside Gallery B

Chairs: Neil Mahant
Sydney, Australia

Philip Starr
San Francisco, CA, USA

15:30 DBS for Parkinson's disease: Non-motor outcomes and long-term results

Jens Volkmann
Würzburg, Germany

3315 Teaching Course **TICKET**, cont.

16:10 DBS for dystonia, tremor and other hyperkinetic disorders

Michele Tagliati
Los Angeles, CA, USA

16:50 Mechanisms of DBS and recent technical developments

Chung-Chin Kuo
Taipei, Taiwan

At the conclusion of this session, participants should be better able to:

1. Recognize the indications, motor and non-motor benefits, potential side effects and long-term outcome of DBS for Parkinson's disease
2. Understand the indications, benefits, possible side effects and long-term outcome of DBS for dystonia, essential tremor and other hyperkinetic disorders
3. Understand the recent advances in the mechanisms of action of DBS and in technical developments such as close-loop stimulation

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

3403 Skills Workshop **TICKET**

Instrumental analysis of gait and posture in Parkinson's disease

18:00 – 19:30

Location: Parkside Ballroom B

In this interactive session, participants will learn how to identify different alterations of parkinsonian gait and understand the relationship between freezing of gait, cognition and anxiety. In addition, participants will be instructed on the clinical utility of instrumental analysis and its current role in clinical practice.

John Nutt
Portland, OR, USA
 Walter Maetzler
Tübingen, Germany

At the conclusion of this session, participants should be better able to:

1. Identify parkinsonian gait disturbance characteristics
2. Describe clinical utility of instrumental gait and posture analysis
3. Interpret pathophysiological and compensatory mechanisms of parkinsonian gait evidenced by instrumental analysis

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

3404 Skills Workshop **TICKET**

Speech and swallowing in movement disorders

18:00 – 19:30

Location: Bayside 201-203

In this interactive session, participants will learn the fundamentals of normal speech and swallowing, in order to then understand how to diagnose and manage speech and swallowing disturbance in hypokinetic and hyperkinetic movement disorders.

Hanneke Kalf
Nijmegen, Netherlands

Debbie Phyland
East Melbourne, Australia

At the conclusion of this session, participants should be better able to:

1. Understand basic principles of the physiology of speech and swallowing
2. Diagnose and manage speech disturbances in patients with movement disorders
3. Diagnose and manage swallowing disturbances in movement disorders

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

3405 Skills Workshop **TICKET**

Normal and abnormal movements in children: How to approach a pediatric patient

18:00 – 19:30

Location: Bayside Terrace

In this interactive session, participants will be better able to examine and recognize normal motor development in children and identify and classify abnormal movements.

Jean-Pierre Lin
London, United Kingdom

Terence Sanger
Los Angeles, CA, USA

At the conclusion of this session, participants should be better able to:

1. Recognize normal or benign abnormal movements in infants and children
2. Recognize the most frequent movement disorders in children and work out towards etiology
3. Recognize developmental disorders

Recommended Audience: Clinical academicians, Practitioners, Students/Residents/Trainees



Tuesday, June 18, 2013

Daily Schedule
Tuesday

3406 Skills Workshop

How to assess cognitive function in parkinsonian syndromes

18:00 – 19:30

Location: Bayside 204

In this interactive session, the faculty will review the clinical spectrum of cognitive symptoms associated with the different parkinsonian syndromes. The faculty will also describe brief and simple cognitive tests and more formal tests for conducting a cognitive assessment. Cognitive assessments will be appraised based on their applicability for the screening for cognitive impairment, differential diagnosis, rating of severity or monitoring disease progression.

John Dalrymple-Alford
Christchurch, New Zealand

Eldson Storey
Melbourne, Australia

At the conclusion of this session, participants should be better able to:

1. Review the spectrum of cognitive symptoms in parkinsonian syndromes
2. Discuss the clinicopathological correlates of cognitive dysfunction
3. Appraise the cognitive assessments in parkinsonian syndromes

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

3407 Skills Workshop

Palliative care and end of life issues in parkinsonism

18:00 – 19:30

Location: Bayside Gallery A

In this interactive session, participants will be better able to understand the prevailing symptoms in advanced parkinsonism that require palliative care approaches and discuss modern concepts that involve a whole-person approach, focusing on quality of life.

Stefan Lorenzl
Munich, Germany

David Oliver
Kent, United Kingdom

3407 Skills Workshop , cont.

At the conclusion of this session, participants should be better able to:

1. Understand the prevailing symptoms in advanced parkinsonism that require palliative care approaches
2. Discuss end of life issues from patients' and caregivers' perspective
3. Discuss modern concepts of palliative care in parkinsonism

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

3408 Skills Workshop

Physical and social disability in Parkinson's disease: From markers to self-management strategies

18:00 – 19:30

Location: Bayside 103

In this interactive session, participants will be able to better recognize the onset and progression of disability across the stages of Parkinson's disease, its impact on quality of life (physical and social) and will be better equipped with the knowledge of self management strategies to empower the patients to live the normal life with chronic disorder.

Terry Ellis
Boston, MA, USA

Lisa Shulman
Baltimore, MD, USA

At the conclusion of this session, participants should be better able to:

1. List the clinical "red flags" marking the onset and progression of disability across the various stages of disease
2. Describe the spectrum of physical and social disability in the daily lives of persons with Parkinson's disease
3. Discuss self-management strategies that can assist Parkinson's patients in reducing disability

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

3509 Video Session

Movement Disorders: Surprises in localization or pathology

18:00 – 19:30

Location: Bayside Gallery B

In this interactive session, the faculty will review videos and possible imaging/pathology of movement disorders that have been caused by unusual lesions or unexpected anatomical sites. The session will discuss lessons learned from these cases in understanding basal ganglia pathophysiology.

Asha Kishore
Trivandrum, India
Susanne Schneider
Kiel, Germany

At the conclusion of this session, participants should be better able to:

1. Review unusual causes of common movement disorders
2. Understand how lesions in the basal ganglia give rise to particular movement disorders
3. Develop a logical method to help evaluate unusual movement disorders

Recommended Audience: Basic scientists, Clinical academicians, Practitioners, Students/Residents/Trainees

3510 Video Session

Jerky, Shaky, What is it?

18:00 – 19:30

Location: Parkside Ballroom A

In this interactive session, participants will be better able to distinguish between myoclonus, tremor, tics, chorea and psychogenic movements.

Nin Bajaj
Nottingham, United Kingdom
Marie Vidailhet
Paris, France

At the conclusion of this session, participants should be better able to:

1. Develop examination techniques to analyze jerky and shaky movements
2. Recognize tremor, myoclonus, cortical tremor, chorea, tics and psychogenic movements
3. Use appropriate investigation to aid diagnosis

Recommended Audience: Clinical academicians, Practitioners, Students/Residents/Trainees



Tuesday, June 18, 2013

3511 Video Session **TICKET**

Ten golden tips on how to better diagnose unusual movement disorders

18:00 – 19:30

Location: Bayside Auditorium A

In this interactive session, participants will be better able to better understand the diagnostic work-up of patients presenting with an unusual movement disorder, and recognize a series of "tips and tricks" used by experts in movement disorders in their own clinical work-up of patients with unusual movement disorders.

Daniel Healy
Dublin, Ireland

Marina De Koning-Tijssen
Groningen, Netherlands

At the conclusion of this session, participants should be better able to:

1. Understand that the diagnostic work-up of any unusual movement disorders starts with a proper clinical description of the phenotype, including the dominant movement disorder, any additional movement disorders, and the accompanying signs
2. Appreciate the broad spectrum and complexity of unusual movement disorders
3. Recognize several "tips and tricks" used by experts in movement disorders in their own clinical work-up of patients with unusual movement disorders

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees





Wednesday, June 19, 2013

4103 Plenary Session IX

Presidential Lectures

8:00 – 10:00

Location: Bayside Auditorium B

Chairs: Günther Deuschl
Kiel, Germany

Matthew Stern
Philadelphia, PA, USA

8:00 Stanley Fahn Lecture: The signs of a neurologist

Philip Thompson
Adelaide, Australia

8:30 Junior Award Lectures

Allison Yarnall
Newcastle upon Tyne, United Kingdom

Mun Kyung Sunwoo
Seoul, Korea

Jee Young Lee
Seoul, Korea

9:30 C. David Marsden Lecture: Parkinson's Disease: The windmills of your mind

Peter Jenner
London, United Kingdom

At the conclusion of this session, participants should be better able to:

1. Appreciate the breadth of processes used by Neurologists in clinical assessment
2. Improve knowledge and understanding of mild cognitive impairment in Parkinson's disease
3. Understand postoperative delirium: indicating underlying Lewy body pathology
4. Understand the 'hyperdopamine' state in patients with Parkinson's disease predisposed by structural changes in the extrastriatal and striatal dopaminergic systems and its relationship to the impulse control disorders in Parkinson's disease
5. Understand the circular nature of progression in understanding the cause, expression and treatment of Parkinson's disease

Recommended Audience: Basic scientists, Clinical academicians, Practitioners, Health Professionals (Non-Physician), Students/Residents/Trainees

4104 Plenary Session X

Prion hypothesis of Parkinson's disease

10:30 – 12:00

Location: Bayside Auditorium B

Chairs: Patrik Brundin
Lund, Sweden

Colin Masters
Parkville, Australia

4104 Plenary Session X, cont.

10:30 The biology of classic prion disease

Colin Masters
Parkville, Australia

11:00 Is Parkinson's disease caused by a prion mechanism?

Patrik Brundin
Lund, Sweden

11:30 Ideas for novel therapies targeting the prion-like mechanism: Problems and possibilities

C. Warren Olanow
Chicago, IL, USA

At the conclusion of this session, participants should be better able to:

1. Define the biological mechanisms that underlie classical prion disease
2. Understand the evidence for neurodegenerative diseases other than Parkinson's disease having a prion-like pathogenesis
3. Discuss the increasing evidence that a prion-like mechanism is involved in the pathogenesis of Parkinson's disease

Recommended Audience: Basic scientists, Clinical academicians, Students/Residents/Trainees

Poster Session 3

12:00 – 13:30

Location: Exhibition Hall 5

Poster viewing: 9:00 – 18:00

Abstract numbers: 666 – 991

Abstract Topics:

Ataxia

Choreas (non-Huntington's disease)

Clinical Electrophysiology

Huntington's disease

Parkinsonism (secondary and parkinsonism-plus)

Parkinson's disease: Phenomenology

Pediatric movement disorders

Tremor

Wilson's disease, storage and metabolic movement disorders

Guided Poster Tours

GPT 9: Parkinson's disease: Cognition

12:00 – 13:30

Location: Bayside Gallery A

Leaders: Murat Emre
Istanbul, Turkey
Jennifer Goldman
Chicago, IL, USA

Guided Poster Tours, cont.

GPT 10: Genetics

12:00 – 13:30

Location: Bayside Gallery B

Leaders: Daniel Healy
Dublin, Ireland
Christine Klein
Luebeck, Germany

GPT 11: Lewy body dementia and other dementias in movement disorders

12:00 – 13:30

Location: Bayside 201-203

Leaders: John Dalrymple-Alford
Christchurch, New Zealand
Glenda Halliday
Randwick, Australia

GPT 12: Surgical therapy of movement disorders other than Parkinson's disease

12:00 – 13:30

Location: Bayside 204

Leaders: Joachim Krauss
Hannover, Germany
Elena Moro
Grenoble, France

Corporate Therapeutic Symposia

13:30 – 14:30

Please see pages 62-63 for more information.

4208 Parallel Session



TICKET

Multiple system atrophy: A wolf in sheep's clothing

15:00 – 17:00

Location: Bayside Auditorium A

Chairs: Richard Boyle
Brisbane, Australia
Gregor Wenning
Innsbruck, Austria

15:00 Challenges in the ante-mortem diagnosis of multiple system atrophy

Tetsutaro Ozawa
Niigata, Japan

15:40 Update on the pathological correlates of autonomic features

Eduardo Benarroch
Rochester, MN, USA



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4208 Parallel Session  , cont.**16:20 Molecular pathogenesis and animal models**

Gregor Wenning
Innsbruck, Austria

At the conclusion of this session, participants should be better able to:

1. Understand the main challenges in accurate ante-mortem diagnosis of MSA
2. Recognize the spectrum of non-motor symptoms in MSA
3. Understand the latest developments in the pathogenesis and therapeutic frontiers in MSA

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

4209 Parallel Session **What's new in essential and non-essential tremor?****15:00 – 17:00**

Location: Parkside Ballroom A

Chairs: Günther Deuschl
Kiel, Germany

Eng-King Tan
Singapore

15:00 The natural history of essential tremor: Lessons from clinical and physiological studies

Jan Raethjen
Kiel, Germany

15:40 The pathology of essential tremor

Holly Shill
Sun City, AZ, USA

16:20 Pathophysiological basis of other tremor

Rick Helmich
Nijmegen, Netherlands

At the conclusion of this session, participants should be better able to:

1. Describe the current clinical definitions, its problems as well as the evolving phenotype in the course of the disease and with increasing age and its pathophysiological correlates
2. Discuss the pros and cons for neurodegenerative processes in essential tremor, possible correlations with the clinical spectrum and alternative explanations for the pathological changes observed. The latest in genetics will also be covered
3. Understand tremor circuitry by analyzing how a lesion can either induce or relieve a tremor

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

4210 Parallel Session **New treatment and pathophysiological concepts in RLS****15:00 – 17:00**

Location: Bayside 103

Chairs: Birgit Högl
Innsbruck, Austria
Juliane Winkelmann
Munich, Germany

15:00 New developments in RLS genetic and pathophysiology

Juliane Winkelmann
Munich, Germany

15:40 The spectrum of treatment options in RLS

Diego Garcia-Borreguero
Madrid, Spain

16:20 Management of the difficult RLS cases: RLS associated with psychiatric disease, in pregnancy, other movement disorders

Birgit Högl
Innsbruck, Austria

At the conclusion of this session, participants should be better able to:

1. Understand the genetics architecture of RLS and implications on diagnosis and pathophysiology
2. Describe the spectrum of treatment options for RLS – including dopaminergic, non-dopaminergic therapy, iron and their complications
3. Manage difficult cases associated with psychiatric or other neurologic diseases including RLS in pregnancy (secondary RLS)

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

4211 Parallel Session **rTMS as a potential treatment in Parkinson's disease****15:00 – 17:00**

Location: Bayside 201-203

Chairs: Alfredo Berardelli
Rome, Italy
Yoshikazu Ugawa
Fukushima, Japan

15:00 rTMS as a tool to understand the physiology of the motor system

Michael Ridding
Adelaide, Australia

4211 Parallel Session  , cont.**15:40 rTMS in understanding the pathophysiology of Parkinson's disease**

Alfredo Berardelli
Rome, Italy

16:20 Is there a future for rTMS in the treatment of motor and non-motor aspects of Parkinson's disease?

Yoshikazu Ugawa
Fukushima, Japan

At the conclusion of this session, participants should be better able to:

1. Understand the complex effects of rTMS on brain physiological mechanisms
2. Describe studies of rTMS in Parkinson's disease
3. Evaluate the possible role of rTMS as a therapeutic tool in Parkinson's disease

Recommended Audience: Basic scientists, Clinical academicians, Practitioners, Students/Residents/Trainees

4212 Parallel Session **How to train the brain: Exercise for movement disorders****15:00 – 17:00**

Location: Parkside Ballroom B

Chairs: Daniela Berg
Tübingen, Germany
Meg Morris
Bundoora, Australia

15:00 The basic science of training effects

Michael Zigmond
Pittsburg, PA, USA

15:40 Training for Parkinson's disease: What is possible?

Meg Morris
Bundoora, Australia

16:20 Training for ataxia

Matthis Synofzik
Tübingen, Germany

At the conclusion of this session, participants should be better able to:

1. Understand the mechanisms of physical exercise on the brain in movement disorders
2. Discuss the physiological basis for therapeutic effects of exercise in hypokinetic movement disorders
3. Discuss the physiological basis for therapeutic effects of exercise in ataxias

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees



Wednesday, June 19, 2013

4213 Parallel Session **TICKET**

The broad heterogeneity of C9ORF72 mutations: The most common genetic forms of FTD/ALS/parkinsonism
15:00 – 17:00

Location: Bayside Gallery A

Chairs: John Hodges
Sydney, Australia
Ian Mackenzie
Vancouver, BC, Canada

15:00 Genetic basis of C9ORF72 mutations
Peter Heutink
Amsterdam, Netherlands

15:40 Pathological features of C9ORF72 mutations
Ian Mackenzie
Vancouver, BC, Canada

16:20 Clinical phenotype of C9ORF72 mutations
Bradley Boeve
Rochester, MN, USA

At the conclusion of this session, participants should be better able to:

1. Learn the genetic mechanisms associated with the C9ORF72 mutation which make it the most common genetic cause of both FTD and ALS
2. Recognize novel pathological features of C9ORF72 mutations which indicate novel disease mechanisms with implications for treatment
3. Understand the variable phenotype associated with the C9ORF72 mutation which includes FTD, ALS and a wide range of other movement disorders

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

4214 Parallel Session **TICKET**

What have we learned from the different integrated care models of Parkinson's disease and other movement disorders?
15:00 – 17:00

Location: Bayside 204

Chairs: Bastiaan Bloem
Nijmegen, Netherlands
Nir Giladi
Tel Aviv, Israel

15:00 Management of gait disorders and falls in Parkinson's disease and Huntington's disease: Does an integrated care model really make a difference?
Lynn Rochester
Newcastle upon Tyne, United Kingdom

15:40 Integrated and comprehensive care for Parkinson's disease: Clinical experience and new scientific evidence
Bastiaan Bloem
Nijmegen, Netherlands

16:20 The need for interprofessional continuing education for delivering optimal integrated care
Ruth Hagestuen
Minnetonka, MN, USA

At the conclusion of this session, participants should be better able to:

1. Appreciate the evidence from recent clinical trials on discipline specific versus integrated care models for the management of Parkinson's disease
2. Appreciate the range of integrated care models in newly emerging fields, such as ataxia
3. Understand how to use inter-professional training approaches as a catalyst to develop and expand Parkinson's teams and regional networks of care

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

4315 Teaching Course **TICKET**

Recognizing and understanding hyperkinetic movement disorders
15:00 – 17:00

Location: Bayside Terrace

Chairs: Hubert Fernandez
Cleveland, OH, USA
Ainhi Ha
Sydney, Australia

15:00 Distinguishing clinical features of hyperkinetic movement disorders
Sarah Teixeira Camargos
Belo Horizonte, Brazil

15:40 Pathophysiology and molecular pathology of hyperkinetic disorders
Ryuji Kaji
Tokushima City, Japan

16:20 Treatment options in hyperkinetic disorders
Steven Frucht
New York, NY, USA

At the conclusion of this session, participants should be better able to:

1. Identify the distinctive features allowing to distinguish tremor, chorea, dystonia, tics, myoclonus and stereotypies, and to recognize other motor abnormalities that may occur in association with these disorders
2. Highlight how the motor, sensorimotor, associative and limbic basal ganglia loops are affected by the different hyperkinetic syndromes compared to hypokinetic syndromes, and to illustrate how dysfunction at the molecular level can entail circuit dysfunction that leads to hyperkinetic phenomenology
3. Review the medical, rehabilitation, and surgical options available to treat hyperkinetic disorders, to distinguish general from specific treatment options, and to highlight available guidelines and treatment algorithms

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

Daily Schedule
Wednesday



Wednesday, June 19, 2013

4316 Teaching Course **TICKET****Clinical examination in movement disorders****15:00 – 17:00**

Location: Bayside Gallery B

Chairs: Rick Stell
Perth, Australia
David Williams
Melbourne, Australia

15:00 Examination tips in tremor

John O'Sullivan
Coorparoo, Australia

15:40 Examination pearls in parkinsonism

David Williams
Melbourne, Australia

16:20 Examination highlights in hyperkinetic movement disorders

Mohit Bhatt
Mumbai, India

At the conclusion of this session, participants should be better able to:

1. Utilize a range of bedside techniques to examine, characterize and differentiate tremors
2. Identify key characteristics of different parkinsonian conditions through the clinical examination
3. Use strategic examination techniques to assist in the differential diagnosis of hyperkinetic movement disorders

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

4403 Skills Workshop **TICKET****New Unified Parkinson's Disease Rating Scale: MDS-UPDRS**
17:30 -19:00

Location: Bayside Auditorium A

In this interactive session, participants will be better able to know how to apply and interpret the MDS-UPDRS, to establish equivalent relationships with other scales for motor and non-motor manifestations, and to grasp the performance of the scale in studies in which it has been applied.

Christopher Goetz
Chicago, IL, USA
Glenn Stebbins
Chicago, IL, USA

4403 Skills Workshop **TICKET**, cont.

At the conclusion of this session, participants should be better able to:

1. Understand the application, recording, and interpretation of the scale, both for research and clinical practice
2. Recognize the relationships between the MDS-UPDRS scores and other independent measures usually applied for assessment of severity of the Parkinson's disease manifestations
3. Apply the MDS-UPDRS and understand its performance in different settings

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

4404 Skills Workshop **TICKET****Pearls in the management of DBS patients****17:30 – 19:00**

Location: Parkside Ballroom B

In this interactive session, participants will be able to better recognize post-operative issues with DBS in patients with Parkinson's disease and dystonia, to develop strategies of management, and to optimize surgical and medical treatment after DBS.

Paul Boulos-Bejjani
Byblos, Lebanon
Stephen Tisch
Sydney, Australia

At the conclusion of this session, participants should be better able to:

1. Manage post-operative motor problems in Parkinson's disease patients
2. Manage post-operative non-motor problems in Parkinson's disease patients
3. Manage post-operative issues in patients with dystonia

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

Supported by an unrestricted educational grant from Medtronic, Inc.

4405 Skills Workshop **TICKET****Lessons I learned from my patients****17:30 – 19:00**

Location: Parkside Ballroom A

In this interactive session, the faculty will present clinical cases from their own practice and discuss the lessons learned when critical appraisal of clinical features has led to a revision of diagnosis and change in management.

Niall Quinn
London, United Kingdom
Bhim Singhal
Mumbai, India

At the conclusion of this session, participants should be better able to:

1. Recognize the lessons for clinical practice from critically reviewing cases where diagnostic or management revisions were made
2. Identify frequent and preventable pitfalls in the evaluation of movement disorder patients
3. Recognize the merits of periodic reassessment of clinical features and patient's management

Recommended Audience: Clinical academicians, Practitioners, Students/Residents/Trainees

4406 Skills Workshop **TICKET****The clinician loses his balance: How to approach genetic and non-genetic ataxias****17:30 – 19:00**

Location: Bayside 204

In this interactive session, which will be illustrated with video examples, participants will be instructed on using clinical, instrumental and genetic tools to investigate different forms of ataxias.

Thomas Klockgether
Bonn, Germany
Bart van de Warrenburg
Nijmegen, Netherlands

At the conclusion of this session, participants should be better able to:

1. Recognize the phenomenology of common and less common form of genetic ataxias
2. Identify a clinical diagnostic approach to distinguish genetic from non-genetic ataxias
3. Understand laboratory and neuroimaging studies useful to identify the different forms of ataxias

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees



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4407 Skills Workshop **TICKET**

Urological and sexual dysfunction in parkinsonism

17:30 – 19:00

Location: Bayside Gallery A

In this interactive session, participants will gain a greater appreciation of the range of sexual and urological problems in people with parkinsonism and the treatment options available.

Gila Bronner
Ramat-Gan, Israel
Jalesh Panicker
London, United Kingdom

At the conclusion of this session, participants should be better able to:

1. Understand basic principles of the physiology of micturition and sexual function
2. Diagnose and manage the bladder disturbances in parkinsonian disorders
3. Diagnose and manage the sexual disturbances in Parkinsonian disorders

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), practitioners, Students/Residents/Trainees

4408 Skills Workshop **TICKET**

The role of the Movement Disorders nurse: A global perspective

17:30 – 19:00

Location: Bayside 103

In this interactive session, participants should be able to discuss international education and practice differences of nurses in movement disorders teams.

Carole Joint
Oxford, United Kingdom
Victor McConvey
Elwood, Australia

At the conclusion of this session, participants should be better able to:

1. Identify the international education and practice differences of specialized Parkinson's nurses
2. Describe the role of the Parkinson's nurses in optimizing the delivery of advanced treatments, including DBS and continuous dopaminergic stimulation
3. Discuss the importance of specialized Parkinson's nurses within a multidisciplinary team approach

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

4509 Video Session **TICKET**

Movement disorders in children: A brave new world

17:30 – 19:00

Location: Bayside Gallery B

In this interactive session, participants will be better able to describe the different movement disorders in children, identifying the most common causes and become familiar with current therapeutic strategies.

Hilla Ben-Pazi
Jerusalem, Israel
Padraic Grattan-Smith
Matraville, Australia

At the conclusion of this session, participants should be better able to:

1. Identify the diversity of the phenomenology of movement disorders in children
2. Make a differential diagnosis of the etiology of most common pediatric movement disorders
3. Establish therapeutic strategies for movement disorders in children

Recommended Audience: Clinical academicians, Practitioners, Health Professionals (Non-Physician), Students/Residents/Trainees

4510 Video Session **TICKET**

What if it's not Huntington's disease?

17:30 – 19:00

Location: Bayside 201-203

In this interactive session, participants will be better able to recognize the phenomenology of the different etiologies of chorea and outline appropriate investigations for the differential diagnosis of the most frequent forms of genetic and acquired chorea.

Anne-Catherine Bachoud-Levi
Creteil, France
Joaquim Ferreira
Lisbon, Portugal

At the conclusion of this session, participants should be better able to:

1. Recognize the phenomenology of Huntington's disease and other disorders in which chorea is the main clinical feature
2. Recognize the phenomenology of Huntington's disease-like (HDL) syndromes
3. Outline appropriate approach and diagnostic work-up for patients with chorea

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

4511 Video Session **TICKET**

The spectrum of craniocervical movement disorders

17:30 – 19:00

Location: Bayside Terrace

In this interactive session, participants will be better able to describe the different manifestation of craniocervical movement disorders and choose the most appropriate therapeutic measures or management.

Giovanni Fabbrini
Rome, Italy
Maria Stamelou
Athens, Greece

At the conclusion of this session, participants should be better able to:

1. Correctly diagnose the craniocervical movement disorders
2. Figure out the treatment and management of each specific condition
3. Link each condition to molecular/genetic diagnosis if possible

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

MDS Video Challenge Pre-Event Gathering

19:00 – 20:00

Location: Bayside Grand Hall

MDS Video Challenge

20:00 – 22:00

Location: Bayside Auditorium B
Please see page 20 for more information.



Thursday, June 20, 2013

5101 Plenary Session XI

Developments in psychogenic movement disorders

8:00 – 9:30

Location: Bayside Auditorium B

Chairs: Kailash Bhatia
London, United Kingdom

Mark Hallett
Bethesda, MD, USA

8:00 Clinical aspects of PMD

Anthony Lang
Toronto, ON, Canada

8:30 The neurobiology of PMD

Mark Edwards
London, United Kingdom

9:00 Management of PMD

Jon Stone
Edinburgh, United Kingdom

At the conclusion of this session, participants should be better able to:

1. Recognize clinical features of psychogenic movement disorders
2. Recognize the pathophysiology and neurobiology of PMD
3. Consider management strategy for PMD disorders including medical and rehabilitative options

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

5102 Controversies in Movement Disorders

10:00 – 11:00

Location: Bayside Auditorium B

Chairs: Cynthia Comella
Chicago, IL, USA

Nir Giladi
Tel Aviv, Israel

10:00 (YES) PDD and DLB are one and the same disorder and should be merged

John Duda
Philadelphia, PA, USA

10:15 (NO) PDD and DLB are one and the same disorder and should be merged

David John Burn
Newcastle upon Tyne, United Kingdom

10:30 (YES) Active impulse control disorders are an indication for DBS

Paul Krack
Grenoble, France

5102 Controversies in Movement Disorders, cont.**10:45 (NO) Active impulse control disorders are an indication for DBS**

Michael Okun
Gainesville, FL, USA

At the conclusion of this session, participants should be better able to:

1. Recognize the similarities and differences between PPD and DLB
2. Recognize the agreements both for and against "lumping" these two disorders together
3. Understand the frequency of ICDs in patients being considered for DBS surgery
4. Recognize the potential advantages and disadvantages to DBS surgery in patients with active ICDs

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

5103 Blue Ribbon Highlights

11:00 – 12:00

Location: Bayside Auditorium B

Chairs: C. Warren Olanow
New York, NY, USA

Olivier Rascol
Toulouse, France

This session will provide a critical review of the best poster presentations by a panel of experts, highlighting the relevance, novelty, and quality of both clinical and basic research presented by the delegates.

Erwan Bezard
Bordeaux, France

Matthew Stern
Philadelphia, PA, USA

At the conclusion of this session, participants should be better able to:

1. Gain an overview of recent developments in the basic science of movement disorders
2. Gain an overview of recent clinical developments
3. Gain an overall perspective on current topics of interest in movement disorders

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

Supported by an unrestricted educational grant from UCB Pharma SA.

Corporate Therapeutic Symposia

12:00 – 13:00

Please see pages 62-63 for more information.

Poster session 4

13:00 – 14:30

Location: Exhibition Hall 5

Poster viewing: 9:00 – 16:00

Abstract numbers: 992 – 1322

Abstract Topics:

Drug-induced Movement Disorders

Spasticity

Basic Science

Education in movement disorders

Epidemiology

Genetics

History

Lewy Body Dementia and other dementias in movement disorders

Myoclonus

Neuropharmacology

Quality of life/caregiver burden in movement disorders

Surgical Therapy: Other Movement Disorders

Surgical Therapy: Parkinson's Disease

Guided Poster Tours**GPT 13: Huntington's disease**

13:00 – 14:30

Location: Bayside Gallery A

Leaders: Elizabeth McCusker
Westmead, Australia

Ralf Meilmann
Muenster, Germany

GPT 14: Parkinson's disease: Clinical Trials

13:00 – 14:30

Location: Bayside Gallery B

Leaders: Jeffrey Kordower
Chicago, IL, USA

Robert Hauser
Tampa, FL, USA

GPT 15: Parkinson's disease: Phenomenology

13:00 – 14:30

Location: Bayside 201-203

Leaders: Timothy Lynch
Dublin, Ireland

David Riley
South Euclid, OH, USA



Thursday, June 20, 2013

Guided Poster Tours, cont.

GPT 16: Tremor

13:00 – 14:30

Location: Bayside 204

Leader: Mark Edwards
London, United Kingdom

5205 Parallel Session

Induced pluripotent stem cells for Parkinson's disease: Past, present and future

15:00 – 17:00

Location: Bayside Auditorium A

Chairs: Etienne Hirsch
Paris, France
Joe Mazzulli
Charlestown, MA, USA

15:00 Induced pluripotent stem cells in regenerative medicine: Past, present and future

Eldad Melamed
Tel Aviv, Israel

15:40 IPS cells as a disease model

Joe Mazzulli
Charlestown, MA, USA

16:20 IPS cells as treatment

Jun Takahashi
Kyoto, Japan

At the conclusion of this session, participants should be better able to:

1. Explain how iPS cells are generated and where we stand on its future use as treatment for neurodegenerative disorders
2. Interpret how iPS cells are instrumental in elucidation of patho-genetic mechanisms underlying neurodegenerative diseases including Parkinson's disease
3. Describe risks and benefits of iPS cell transplantation therapy in Parkinson's disease

Recommended Audience: Basic scientists, Clinical academicians, Practitioners, Students/Residents/Trainees

5206 Parallel Session

Gilles de la Tourette syndrome

15:00 – 17:00

Location: Bayside 201-203

Chairs: Mary Robertson
London, United Kingdom
Julian Rodrigues
Shenton Park, Australia

5206 Parallel Session , cont.

15:00 Clinical features of Tourette syndrome

Alexander Münchau
Hamburg, Germany

15:40 The neural networks involved in Tourette syndrome

Paul Sandor
Toronto, ON, Canada

16:20 Medical and surgical treatment of Tourette syndrome

Mary Robertson
London, United Kingdom

At the conclusion of this session, participants should be better able to:

1. Describe the clinical features of Tourette syndrome
2. Describe the neural networks involved in Tourette syndrome
3. Describe medical and DBS treatment for Tourette syndrome

Recommended Audience: Basic scientists, Clinical academicians, Students/Residents/Trainees

5207 Parallel Session

Regional atypical parkinsonian syndromes

15:00 – 17:00

Location: Bayside Gallery A

Chairs: Irene Litvan
La Jolla, CA, USA
Huw Morris
Cardiff, United Kingdom

15:00 Clinical features of the atypical parkinsonian syndromes in Guam, Japan and Guadeloupe: Similarities and differences

John Steele
Tamuning, Guam

15:40 Underlying pathology and proposed etiopathogenesis

Annie Lannuzel
Pointe-à-Pitre, France

16:20 The link between the atypical parkinsonian syndromes in the Pacific and PSP, corticobasal syndrome and FTD/ALS

Huw Morris
Cardiff, United Kingdom

At the conclusion of this session, participants should be better able to:

1. Understand the clinical features of atypical parkinsonian syndromes in Guam, Japan, and Guadeloupe

5207 Parallel Session , cont.

2. Understand the underlying pathology and proposed etiopathogenesis of these disorders
3. Understand potential links between these disorders and PSP, CBD and FTD/ALS

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

5208 Parallel Session

An update on dystonia

15:00 – 17:00

Location: Parkside Ballroom B

Chairs: Victor Fung
Westmead, Australia
Christine Klein
Lübeck, Germany

15:00 An update on "primary" dystonia

Christine Klein
Lübeck, Germany

15:40 An update on "secondary" dystonia

Victor Fung
Westmead, Australia

16:20 An update on medical and emerging therapies for dystonia

Pedro Gonzalez-Alegre
Iowa City, IA, USA

At the conclusion of this session, participants should be better able to:

1. Classify and investigate a patient presenting with "primary" (pure) dystonia
2. Classify and investigate a patient presenting with "secondary" (mixed) dystonia
3. Treat dystonia with medications and know when to consider more invasive or advanced therapies

Recommended Audience: Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees



Thursday, June 20, 2013

5209 Parallel Session **TICKET****Movement disorders in internal medicine****15:00 – 17:00**

Location: Bayside 204

Chairs: Oscar Gershanik
Buenos Aires, Argentina
Jonas Hon Ming Yeung
Hong Kong

15:00 Movement disorders and non-neurological infections

Fernando Alarcon
Quito, Ecuador

15:40 Movement disorders in systemic disease

Jonas Hon Ming Yeung
Hong Kong

16:20 Movement disorders and non-psychiatric drugs

Oscar Gershanik
Buenos Aires, Argentina

At the conclusion of this session, participants should be better able to:

1. Describe the phenomenology of movement disorders associated to non-neurological infections, metabolic disorders and non-psychiatric drugs
2. Discuss the mechanisms underlying movement disorders associated to non-neurological infections, metabolic disorders and non-psychiatric drugs
3. Treat movement disorders associated to non-neurological infections, metabolic disorders and non-psychiatric drugs

Recommended Audience: Clinical academicians, Practitioners, Students/Residents/Trainees

5210 Parallel Session **TICKET****Striatal network adaptations underlying levodopa-induced dyskinesias****15:00 – 17:00**

Location: Parkside Ballroom A

Chairs: Malcolm Horne
Parkville, Australia
D. James Surmeier
Chicago, IL, USA

15:00 Biochemical, anatomical and physiological hallmarks of LIDs

Malcolm Horne
Parkville, Australia

15:40 LID-induced adaptations in the striatal network

Anna Castrioto
Grenoble, France

5210 Parallel Session **TICKET**, cont.**16:20 New therapeutic strategies for alleviating LIDs**

Jonathan Brotchie
Toronto, ON, Canada

At the conclusion of this session, participants should be better able to:

1. Describe the biochemical, anatomical and physiological hallmarks of levodopa-induced dyskinesias (LIDs) in the striatum
2. Describe alterations in the properties of the striatal network controlling movement
3. Identify the therapeutic strategies being developed to alleviate LIDs

Recommended Audience: Basic scientists, Clinical academicians, Students/Residents/Trainees

5311 Teaching Course  **TICKET****Imaging techniques in degenerative movement disorders: A window on the pathologist's world****15:00 – 17:00**

Location: Bayside Gallery B

Chairs: Daniela Berg
Tübingen, Germany
Antonio Strafella
Toronto, ON, Canada

15:00 The role of magnetic resonance imaging techniques in neurodegenerative diseases

Martin McKeown
Vancouver, BC, Canada

15:40 Transcranial sonography in Parkinson's disease

Daniela Berg
Tübingen, Germany

16:20 PET receptor imaging in movement disorders

Nicola Pavese
London, United Kingdom

At the conclusion of this session, participants should be better able to:

1. Describe different MRI techniques used in movement disorders
2. Define the role of transcranial sonography in Parkinson's disease
3. Describe the contribution of receptor imaging in movement disorders

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees

5312 Teaching Course **TICKET****Update on botulinum toxin treatment****15:00 – 17:00**

Location: Bayside Terrace

Chairs: Cynthia Comella
Chicago, IL USA
Erle Chuen-Hian Lim
Singapore

15:00 Scientific basis for botulinum toxin therapy

Raymond Rosales
Manila, Philippines

15:40 Methods for administering botulinum toxins

Erle Chuen-Hian Lim
Singapore

16:20 Case studies: Update on treatment approaches

Roongroj Bhidayasiri
Bangkok, Thailand

At the conclusion of this session, participants should be better able to:

1. Identify the scientific basis for botulinum toxin therapy and distinguish toxin formulations
2. Understand methods of administering botulinum toxins including palpation, EMG, ultrasound, and imaging
3. Discuss treatment paradigms for dystonia and spasticity using patient videos

Recommended Audience: Basic scientists, Clinical academicians, Health Professionals (Non-Physician), Practitioners, Students/Residents/Trainees



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Corporate Therapeutic Symposia

Monday, June 17, 2013

Teva Pharmaceuticals Industries, Ltd./H. Lundbeck A/S

14:00 – 15:00

Location: Bayside Auditorium A

**Treatment Optimization in Parkinson's Disease:
When Monotherapy is not Enough**

Chair: Matthew Stern
Philadelphia, PA, USA

Optimizing Dopamine – Key to Effective Treatment in PD

Peter Jenner
London, United Kingdom

Optimizing PD Pharmacotherapy – Clinical Strategies for Managing Motor Symptoms with Combination Therapy

Robert Hauser
Tampa, FL, USA

Q&A

Allergan, Inc.

14:00 – 15:00

Location: Parkside Ballroom B

Rediscovering CD: Insights into Diagnosis, Comorbidities and Treatment Implications

Chair: David Williams
Melbourne, Australia

Multidimensional Aspects of CD: A Physician, Patient and Societal Perspective

David Williams
Melbourne, Australia

CD Comorbidities and Botulinum Toxin

Sheena Aurora
Stanford, CA, USA

CD Comorbidities and Underlying Genetic Mechanisms

Nutan Sharma
Boston, MA, USA

Panel discussion and closing remarks

Tuesday, June 18, 2013

Ipsen Pharma

14:00 – 15:00

Location: Bayside Auditorium A

Stepping forward in the real life management of patients with movement disorders

Chair: Andrew Hughes
Melbourne, Australia

Managing cervical dystonia patient expectations – the key to a successful treatment

Kailash Bhatia
London, United Kingdom

Are cervical dystonia measurement scales in line with real needs?

Susan Fox
Toronto, ON, Canada

Shaping spasticity management to achieve patient goals

Ian Baguley
Westmead, Australia

UCB Pharma S. A.

14:00 – 15:00

Location: Parkside Ballroom B

An update in management of Parkinson's disease

Chair: Michael Hayes
Concord, Australia

Challenges in managing the motor symptoms in the early and advanced Parkinson's disease patient

Masahiro Nomoto
Tohon, Japan

Non-motor symptoms in Parkinson's disease: The other face of the disease

Michael Hayes
Concord, Australia

Parkinson's disease in elderly patients: Key considerations when treating this population

Evzen Ruzicka
Prague, Czech Republic

Tuesday, June 18, 2013

Science and Technology Pavilion

Teva Pharmaceuticals Industries, Ltd. and H. Lundbeck A/S

8:30 – 17:00

Location: Bayside 106

During the 17th International Congress of Parkinson's Disease and Movement Disorders, MDS' industry partners are able to provide physicians the opportunity to learn about the latest science in an interactive session, known as the Science and Technology Pavilion.

The Science and Technology Pavilion will provide a less hurried educational atmosphere in which physicians and healthcare professionals can interact with company representatives to enhance their knowledge of emerging technologies and optimal treatment techniques, and experience hands-on demonstrations of the latest technology in a private atmosphere. CME will be not given for any activities in the Science and Technology Pavilion. All Congress participants are encouraged to visit the Pavilion.



Corporate Therapeutic Symposia

Wednesday, June 19, 2013

AbbVie

13:30 – 14:30

Location: Bayside Auditorium A

Continuous dopaminergic stimulation therapy: A new era for care in advanced Parkinson's disease?

Chairs: Erik Wolters
Amsterdam, The Netherlands
Angelo Antonini
Venice, Italy

Chair's introduction

Erik Wolters
Amsterdam, The Netherlands

Clinical value of levodopa-carbidopa intestinal gel:

Latest evidence

Hubert H. Fernandez
Cleveland, OH, USA

Improving outcomes with continuous dopaminergic stimulation therapy: Who to treat?

Per Odin
Bremerhaven, Germany

Who and how to treat with continuous dopaminergic stimulation therapy? Patent cases

Angelo Antonini
Venice, Italy

Panel discussion

Chair's summary

Angelo Antonini
Venice, Italy

Novartis Pharma AG

13:30 – 14:30

Location: Parkside Ballroom B

Levodopa-induced motor complications: New insights into risk and management

Chairs: C. Warren Olanow
New York, NY, USA
Fabrizio Stocchi
Rome, Italy

Introduction

C. Warren Olanow
New York, NY, USA

Motor and non-motor complications in Parkinson's disease: Clinical presentations and mechanisms

José Obeso
Pamplona, Spain

Risk factors for the development of motor complications in Parkinson's disease

C. Warren Olanow
New York, NY, USA

A practical approach to risk reduction of motor complications

Anthony Schapira
London, United Kingdom

Panel discussion

All

Thursday, June 20, 2013

Britannia Pharmaceuticals Limited

12:00 – 13:00

Location: Bayside Auditorium B

Infusion of Apomorphine in Parkinson's disease: New considerations

Chair: Werner Poewe
Innsbruck, Austria

Apomorphine infusion for motor complications in Parkinson's disease – current evidence and new perspectives

Regina Katzenschlager
Vienna, Austria

New data to guide optimised treatment with apomorphine

Sophie Drapier
Paris, France



Exhibitor Information

Exhibit Hall

Location: Exhibition Hall 5

Please allow adequate time in your daily schedule to visit the Exhibit Hall. The exhibition is an integral component of your International Congress experience, offering you the opportunity to speak with representatives of companies providing services or marketing products directly related to Movement Disorders.

Exhibit Hall hours are as follows:

Sunday, June 16.....	19:30 – 21:00*
Monday, June 17.....	9:00 – 18:00
Tuesday, June 18.....	9:00 – 18:00
Wednesday, June 19.....	9:00 – 18:00
Thursday, June 20.....	9:00 – 16:00

(*during Welcome Ceremony)

Exhibitor Registration

Location: Parkside Promenade, Ground Level

Exhibitors must register and pick up their badge at the Exhibitor Registration Desk.

Exhibitor Registration Desk hours are as follows:

Saturday, June 15.....	16:00 – 20:00
Sunday, June 16.....	7:00 – 18:00
Monday, June 17.....	7:00 – 18:00
Tuesday, June 18.....	7:00 – 18:00
Wednesday, June 19.....	7:00 – 18:00
Thursday, June 20.....	7:00 – 16:00

Exhibitor Badge Policy

Admission to the Exhibit Hall will be by name badge only. Security guards will monitor Exhibit Hall entrances for proper identification. Exhibit stand personnel must show an official MDS exhibitor name badge in order to gain access to the Exhibit Hall during installation, show, or dismantling hours.

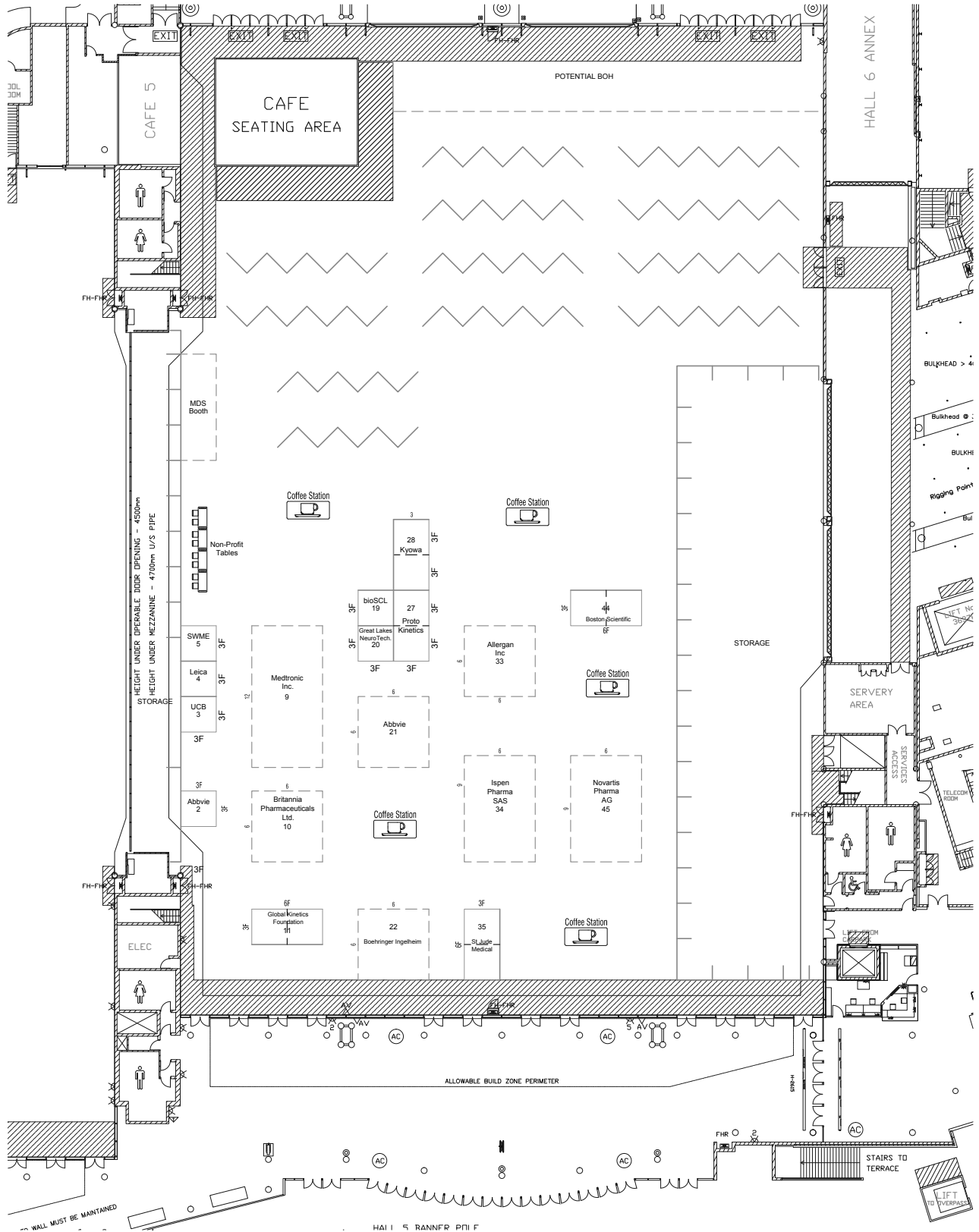
Exhibitor Personnel Badge (Yellow): Allows admittance to the Exhibit Hall only.

Endorsement Disclaimer

Products and services displayed in the Exhibit Hall or advertised in the program occur by contractual business arrangements between MDS and participating companies and organizations. These arrangements do not constitute nor imply an endorsement by MDS of these products and services.



Exhibit and Poster Hall Floor Plan



Exhibitor Information



Exhibitor Directory

ABBVIE

1 North Waukegan Road
North Chicago, IL 60064
United States
Telephone: +1 847-938-6918
Website: www.abbvie.com

Booths #: 2, 21

AbbVie is a global, research-based biopharmaceutical company formed in 2013 following separation from Abbott. With its 125-year history, the company's mission is to use its expertise, dedicated people and unique approach to innovation to develop and market advanced therapies that address some of the world's most complex and serious diseases. In 2013, AbbVie employs approximately 21,000 people worldwide and markets medicines in more than 170 countries. For further information on the company and its people, portfolio and commitments, please visit www.abbvie.com.

ALLERGAN

810 Pacific Hwy, Gordon
Sydney, NSW 2072
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Telephone: +61 2 9498 0103
Fax: +61 2 9498 0184
Website: www.allergan.com

Booth #: 33

Allergan is a global, technology-driven, multi-specialty health care company pursuing therapeutic advances to help patients live life to their fullest potential. Founded in 1950 and headquartered in Irvine, California, Allergan Inc is a pharmaceutical, biologics and medical devices company. Allergan Australia Pty Ltd was first established in Sydney in 1968. Our product offerings focus on the areas of Neurosciences, Eye Care, Medical Aesthetics, and Health (Obesity).

BIOCSL

45 Poplar Rd.
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Australia
Telephone: +61 3 9389 2000
Fax: +61 3 9389 1874

Booth #: 19

bioCSL manufactures, markets and distributes seasonal and pandemic influenza vaccine worldwide. In Australia and New Zealand, bioCSL markets a comprehensive range of vaccines and pharmaceutical products. It also manufactures products of national significance for Australia, including antivenoms and Q-Fever vaccine, and supplies diagnostic reagents in the Australasia region. bioCSL's cold-chain logistics business ensures the integrity of CSL products, as well as those of our customers, as they are safely delivered across Australia.

BOEHRINGER INGELHEIM

78 Waterloo Rd.
North Ryde, NSW 2113
Australia
Telephone: +612 8875 8800
Website: www.boehringer-ingelheim.com

Booth #: 22

The Boehringer Ingelheim group is one of the world's 20 leading pharmaceutical companies. Headquartered in Ingelheim, Germany, it operates globally with 145 affiliates and more than 44,000 employees.

Since it was founded in 1885, the family-owned company has been committed to researching, developing, manufacturing and marketing novel products of high therapeutic value for human and veterinary medicine.

BOSTON SCIENTIFIC

25155 Rye Canyon Loop
Valencia, CA 91355
USA
Telephone: +1 661-949-4000
Website: www.controlyourpain.com

Booth #: 44

Investing in innovative products, clinical initiatives, and world-class service, Boston Scientific is committed to leading the way in spinal cord stimulation by providing better pain relief to a broad range of patients.

BRITANNIA PHARMACEUTICALS LTD

100 Berkshire Place
Wharfedale Road
Winnersh, Berkshire RG41 5RD
United Kingdom
Website: www.britannia-pharm.com

Booth #: 10

Britannia Pharmaceuticals Limited is a UK based pharmaceutical company specializing in niche innovative products for chronic and serious medical conditions, and in particular, the treatment of patients with Parkinson's disease. The need for apomorphine as a treatment option for Parkinson's disease has led to the development of APO-go and other associated brands around the globe, which are available in many countries through our Distribution or Licensing Partners. For more information please visit www.britannia-pharm.com or www.apo-go.com



Exhibitor Directory

GLOBAL KINETICS CORPORATION

530 Collins Street, Level 6
Melbourne, VIC 3000
Australia
Telephone: +61 3 9605 0847
Fax: +1 704-752-1479
Website: www.globalkineticscorporation.com

Booth #: 11

GKC has developed the Parkinson's KinetiGraph (PKG) for objective ambulatory assessment of PD. The PKG records patients' movement continuously over 10 days and reports a patient's clinical state including scaled measures of bradykinesia and dysregulation with repeat reliability, links fluctuations with the timing of medication and provides a record of patient compliance.

GREAT LAKES NEUROTECH

10055 Sweet Valley Drive
Cleveland, OH 44125
USA
Fax: +1 216-361-5420
Website: www.GLNeuroTech.com

Booth #: 20

Great Lakes NeuroTechnologies provides innovative medical systems for Parkinson's disease. Kinesia technology remotely and quantitatively captures Parkinson's symptoms using motion sensors and a touchscreen tablet PC integrated with broadband and video instructions. Kinesia HomeView transfers trends from patient homes to web-based reports that visualize symptoms and fluctuations for telemedicine applications. Kinesia ProView is used in the clinic to visualize motor symptom changes in response to DBS programming and track changes over time with web-based reports.

IPSEN

65 Quai Georges Gorse
Boulogne Billancourt 92100
France
Telephone: +33 1 58 33 6058
Website: www.ipsen.com

Booth #: 34

Ipsen is a global specialty-driven pharmaceutical company with total sales exceeding €1.2 billion in 2012. Ipsen's ambition is to become a leader in specialty healthcare solutions for targeted debilitating diseases. Its development strategy is supported by four franchises: neurology, endocrinology and uro-oncology. Moreover, the Group has an active policy of partnerships. R&D is focused on innovative and differentiated technological patient-driven platforms, peptides and toxins. In 2012, R&D expenditure totaled close to €250 million, representing more than 20% of Group sales.

KINETICS FOUNDATION

PO Box 645
Los Altos, CA 94023
USA
Telephone: +1 650-523-1310
Website: www.kineticsfoundation.org

Table #: E

The Kinetics Foundation is a private bioengineering philanthropy in Silicon Valley. Our Objective Parkinson's Disease Measurement (OPDM) System is a platform for functional biomarkers of PD. Our latest system, OPDM 2.0, works on web and smartphone platforms. We also inform surgical trials on direct drug delivery techniques to the brain.

KYOWA HAKKO KIRIN CO., LTD.

1-6-1, Ortemachi, Chiyoda-ku
Tokyo 100-8185
Japan
Telephone: +81 3 3282 0959

Booth #: 28

Kyowa Hakko Kirin is a Japan-based global Specialty Pharmaceutical Company contributing to human health and well-being worldwide. One of its strategic categories is CNS area, to help/support the treatment of patients suffering from Parkinson's disease and other CNS diseases.

LEICA MICROSYSTEMS

Unit 3, 112-118 Talavera Road
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Website: www.leica-microsystems.com

Booth #: 4

Leica Microsystems is a leading global designer and producer of innovative high-tech precision optics systems. Leica Microsystems is a market leader in Microscopy, Confocal Microscopy, Microscopy Software, Specimen Preparation and Medical Equipment. It offers solutions for life sciences, neuroscience and the science of raw materials and industrial quality assurance.



Exhibitor Directory

MEDTRONIC, INC.

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Website: www.medtronic.com

Booth #: 9

At Medtronic, we're committed to *Innovating for life* by pushing the boundaries of medical technology and changing the way the world treats chronic disease. Last fiscal year, more than eight million patients benefited from our products and therapies. Medtronic DBS Therapy has been used in more than 100,000 patients worldwide for the treatment of Parkinson's disease, essential tremor and dystonia.

NEUROLOGICAL FOUNDATION OF NEW ZEALAND

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Auckland 1148
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Telephone: +64 9 309 7749
Website: www.neurological.org.nz

Table #: C

The Neurological Foundation is an independent body and charitable trust, and is the only dedicated funder of New Zealand-based clinical and biomedical neurological research. All funding is generated from individual and community donations, and enables leading neuroscientists and neurologists to progress their innovative, high-quality research across many universities and hospitals in New Zealand. Join us at www.neurological.org.nz

NOVARTIS PHARMA AG

Forum 1, Novartis Campus
Basel 4056
Switzerland
Telephone: +41 61 324 1111
Fax: +41 61 324 8001
Website: www.novartis.com

Booth #: 45

Novartis provides innovative healthcare solutions that address the evolving needs of patients and societies. Headquartered in Basel, Switzerland, Novartis offers a diversified portfolio to best meet these needs: innovative medicines, eye care, cost-saving generic pharmaceuticals, preventive vaccines and diagnostic tools, over-the-counter and animal health products. Novartis is the only global company with leading positions in these areas. In 2011, the Group's continuing operations achieved net sales of USD \$58.6 billion, while approximately USD \$9.6 billion (USD \$9.2 billion excluding impairment and amortization charges) was invested in R&D throughout the Group. Novartis Group companies employ approximately 126,000 full-time-equivalent associates and operate in more than 140 countries around the world. For more information, please visit www.novartis.com.

OXFORD UNIVERSITY PRESS

Great Clarendon Street
Oxford OX2 6DP
United Kingdom
Telephone: +44 1 865 556767
Website: www.oup.com

Table #: A

Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide.

PROTOKINETICS, LLC

60 Garlor Drive
Havertown, PA 19083
USA
Telephone: +1 610-449-4879
Fax: +1 610-853-2925
Website: www.protokinetics.com

Booth #: 27

ProtoKinetics develops human movement analysis systems for use in research, education, and in the clinic. ProtoKinetics Movement Analysis Software and Zeno Walkway provide scientifically valid and clinically relevant output measures for a variety of static and dynamic tests that can be applied across the healthcare industry.



Exhibitor Directory

SOCIETY FOR WORLDWIDE MEDICAL EXCHANGE

1666 Kennedy Causeway, Suite 410
N. Bay Village, FL
USA
Telephone: +1 786-334-4439
Website: www.worldwidemedicalexchange.org

Booth #: 5

SWME is a non-profit organization with the mission of expanding global access to continuing medical education

ST. JUDE MEDICAL

17 Orion Road
Lane Cove, NSW 2066
Australia
Telephone: +61 2 993 61286
Fax: +61 2 9936 1222
Website: www.sjmneuro.com

Booth #: 35

St. Jude Medical develops medical technology and services that focus on putting more control into the hands of those who treat cardiac, neurological and chronic pain patients worldwide. SJM has provided leading neurostimulation therapy innovations for 30 years. The company is dedicated to advancing the practice of medicine by reducing risk wherever possible and contributing to successful outcomes for every patient.

UCB AUSTRALIA

111155 Malvern Road
Malvern, VIC 3144
Australia
Telephone: +61 3 9828 1800
Website: www.ucb.com

Booth #: 3

UCB aspires to be the patient-centric global biopharmaceutical leader, transforming the lives of people with severe diseases. At UCB our sense of purpose is to help people suffering from severe central nervous system disorders lead normal, everyday lives. Our ambition is to offer them innovative new medicines and ground-breaking solutions that go beyond the drug. We are committed to enabling cutting-edge scientific research that is driven by patients' needs.

WORLD PARKINSON CONGRESS

1359 Broadway, Suite 1509
New York, NY 10018
United States
Telephone: +1 800-457-6676
Fax: +1 212-923-4778
Website: www.worldpdcongress.org

Table #: B

The 3rd World Parkinson Congress | WPC 2013 will take place from October 1 to 4, 2013 in Montreal, Canada. Physicians, neuroscientists, nurses, rehabilitation specialists, people with PD, care partners and government officials will come together to learn about the latest scientific discoveries, medical practices, and care initiatives for Parkinson's disease. Visit www.worldpdcongress.org to learn more about this unique global event.



Guided Poster Tours

GUIDED POSTER TOUR 1 –

Basic science

Bayside Level 1, Bayside Gallery A

12:30 – 14:00

Monday, June 17, 2013

Tour Leaders:

Anthony Schapira, *London, United Kingdom*

- 1004 RNAi-mediated silencing of VPS35 exacerbates phenotypic and locomotor abnormalities in α -synuclein transgenic *Drosophila***
T. Hasegawa, M. Konno, E. Miura, N. Sugeno, Y. Nagai, N. Fujikake, M. Suzuki, A. Kikuchi, M. Aoki, A. Takeda (Sendai, Japan)
- 1005 Nedd4 E3 ubiquitin ligase facilitates the endosomal targeting of alpha-synuclein**
N. Sugeno, T. Hasegawa, M. Konno, E. Miura, A. Kikuchi, M. Aoki, A. Takeda (Sendai, Japan)
- 1008 Impaired redox balance and autophagosome clearance in fibroblasts from Parkinson's disease patients with LRRK2 G2019S mutation**
A. Grünewald, B. Arns, P. Seibler, B. Meier, A. Rakovic, C. Klein (Lübeck, Germany)
- 1017 Role of the ubiquitin proteasome system and the lysosomal system in PINK1-/ parkin-dependent mitophagy in human primary fibroblasts**
K. Shurkewitsch, A. Rakovic, C. Klein (Lübeck, Germany)
- 1018 Cholinergic olfactory centrifugal inputs are reduced in patients with neurodegenerative disorders and MPTP treated monkeys**
I.C. Mundiñano, M. Hernandez, C. Ordoñez, C. Di Caudo, I. Marcilla, T. Tuñon, M.R. Luquin (Pamplona, Spain)
- 1024 Copper pathology in the vulnerable substantia nigra in Parkinson's disease**
K.M. Davies, S. Bohic, R. Ortega, V. Cottam, D.J. Hare, J.P.M. Finberg, G. Halliday, J.F.B. Mercer, K.L. Double (Sydney, Australia)
- 1034 Withdrawn by Author**
- 1039 Overexpression of cannabinoid CB2 receptors attenuated the progressive motor impairment and nigrostriatal dopaminergic neurons loss in MitoPark mouse**
F. Navarrete-Rueda, J.M. Pérez-Ortiz, M.S. Garcia-Gutierrez, J.A. Molina-Arjona, C. Leiva-Santana, J. Manzanares (San Juan de Alicante, Spain)
- 1049 Using the anterior olfactory nucleus to study lewy pathology in olfactory structures**
S. Rajan, R. Bandopadhyay, A. Kingsbury, H. Ayling, W. Sterlacci, W. Poewe, H. Maier, M. Ezquerro, A. Lees, T. Revesz, L. Silveira-Moriyama (London, United Kingdom)
- 1052 Catecholamine substrates of behavioral inflexibility in a rat model of Parkinson's disease**
E.M. Vazey, K.M. Fender, Z.A. Cope, S.B. Floresco, G. Aston-Jones (Charleston, SC, USA)

GUIDED POSTER TOUR 2 –

Parkinson's disease: Behavioral disorders

Bayside Level 1, Bayside Gallery B

12:30 – 14:00

Monday, June 17, 2013

Tour Leaders:

Hubert Fernandez, *Cleveland, OH, USA*

Daniel Weintraub, *Ardmore, PA, USA*

Supported by an unrestricted educational grant from UCB Pharma SA.

- 338 A novel α -synuclein-GFP mouse model displays progressive motor impairment, olfactory dysfunction and accumulation of α -synuclein-GFP**
C. Hansen, T. Björklund, G.H. Petit, M. Lundblad, R.P. Murmu, P. Brundin, J.Y. Li (Lund, Sweden)
- 345 I finally see what you see: A window into Parkinson's disease hallucinations**
G.T. Stebbins, C.G. Goetz, J.G. Goldman, C.L. Vaughan (Chicago, IL, USA)
- 354 Gray matter neuroimaging signatures of Parkinson's disease hallucinations**
J.G. Goldman, V. Dinh, G.T. Stebbins, B. Bernard, L. deToledo-Morrell, C.G. Goetz (Chicago, IL, USA)
- 355 Decisions under risk in Parkinson's disease: Evaluating probability and magnitude for gain and loss**
M.E. Sharp, J. Viswanathan, M.J. McKeown, S. Appel-Cresswell, A.J. Stoessl, J.J.S. Barton (Vancouver, BC, Canada)
- 357 Dopamine agonists rather than deep brain stimulation cause reflection impulsivity in Parkinson's disease**
A. Djamshidian, S.S. O'Sullivan, T. Foltynie, I. Aviles-Olmos, P. Limousin, A. Noyce, L. Zrinzo, A.J. Lees, B.B. Averbeck (London, United Kingdom)
- 359 Modulation of attentional network coherence during manipulation of cognitive load in patients with Parkinson's disease and freezing of gait**
J.M. Shine, E. Matar, M. Gilat, S.J. Bolitho, P.B. Ward, S.L. Naismith, S.J.G. Lewis (Sydney, Australia)
- 360 Sedentary behavior increases over 18 months in early Parkinson's disease**
S. Lord, A. Godfrey, B. Galna, D. Mhiripiri, D. Burn, L. Rochester (Newcastle upon Tyne, United Kingdom)
- 366 Assessment of impulse control disorders in Parkinson's disease patients with infusion therapies: A single center experience**
A. Todorova, A. Martin, D. Okai, M. Samuel, R. Brown, A. David, K. Ray Chaudhuri (London, United Kingdom)
- 375 Psychiatric comorbidities among hospitalized Parkinson's disease patients**
M. Minen, N. Mejia (Boston, MA, USA)
- 382 Long-term cognitive follow-up of impulse control disorders in Parkinson's disease: A prospective longitudinal controlled study**
C. Siri, A. Colombo, B. Pozzi, E. Reali, N. Meucci, M. Canesi, A.L. Zecchinelli, C.B. Mariani, G. Sacilotto, M. Zini, C. Ruffmann, G. Pezzoli, R. Cilia (Milan, Italy)



Guided Poster Tours

GUIDED POSTER TOUR 3 –

Parkinson's disease: Neuropharmacology

Bayside Level 2, Bayside 201-203

12:30 – 14:00

Monday, June 17, 2013

Tour Leaders:

Mark Guttman, *Markham, ON, Canada*

Cristina Sampaio, *Princeton, NJ, USA*

- 580 Behavioural, biochemical and cellular correlates in the neuroprotective potential of HMG-CoA reductase inhibitors (atorvastatin and simvastatin) against 6-hydroxydopamine (6-OHDA) induced Parkinson-like symptoms in rats**
J. Mishra, N. Sharma, A. Kumar (Chandigarh, India)
- 587 Inosine inhibited the neurotoxicity of MPTP on the dopaminergic neurons**
T. Tsujii, M. Kubo, H. Iwaki, W.T. Kyaw, N. Nishikawa, M. Nagai, R. Andoh, F. Islam, M. Nomoto (Tohon, Japan)
- 589 Performance of a task learned when "on" deteriorates when subsequently practiced in "off" state**
E.D. Anderson, E. Murdock, H. Fay, J.G. Nutt (Portland, OR, USA)
- 593 Chronic treatment with MPEP, an mGlu5 receptor antagonist, normalizes basal ganglia glutamate neurotransmission in L-DOPA-treated parkinsonian monkeys**
N. Morin, M. Morissette, L. Grégoire, B. Gomez-Mancilla, F. Gasparini, T. Di Paolo (Quebec, QC, Canada)
- 594 Identifying the transcriptomic signature of L-DOPA-induced dyskinesias**
L.M. Smith, E.J. Duncan, L.C. Parr-Brownlie, M.A. Black, P.K. Dearden, J.N.J. Reynolds (Dunedin, New Zealand)
- 596 The EuroInf study: A multi-centre European comparative study of apomorphine versus intrajejunal levodopa infusion in a real life cohort of Parkinson's disease patients**
P. Reddy, P. Martinez-Martin, A. Todorova, A. Antonini, P. Odin, A. Martin, A. Rizos, D. Calandrella, T. Henricksen, N. Bryndum, A. Glad, S. Dafsari, L. Timmermann, G. Ebersbach, M. Kramberger, A. Ceballos-Baumann, K. Wenzel, V. Tomantschger, A. Storch, H. Reichmann, Z. Pirtosek, M. Trost, R. Katzenschlager, P. Svenningsson, S. Palhagen, J. Volkmann, K.R. Chaudhuri, The Movement Disorder Society Non Motor Study Group (London, United Kingdom)
- 600 Investigating the neuroprotective effects of valproate, an epigenetic histone deacetylase inhibitor, in Parkinson's disease using preclinical magnetic resonance imaging**
I.F. Harrison, D.T. Dexter (London, United Kingdom)
- 607 Withdrawn by Author**
- 612 Effects of chronic D2/3 agonist ropinirole medication on rodent models of gambling behaviour**
M. Tremblay, J.G. Hosking, C.A. Winstanley (Vancouver, BC, Canada)
- 619 Time-to-levodopa depending on initial PD medication: A retrospective cohort study**
J.P. Reese, U.O. Mueller, W.H. Oertel, R. Dodel, K. Kostev (Marburg, Germany)

GUIDED POSTER TOUR 4 –

Sleep disturbance and RLS

Bayside Level 2, Bayside 204

12:30 – 14:00

Monday, June 17, 2013

Tour Leaders:

K. Ray Chaudhuri, *London, United Kingdom*

Supported by an unrestricted educational grant from UCB Pharma SA.

- 651 Rare variants in restless legs syndrome**
E. Schulte, F. Knauf, B. Schormair, P. Lichtner, C. Trenkwalder, B. Högl, B. Frauscher, K. Berger, I. Fietze, N. Gross, K. Stiasny-Kolster, W. Oertel, C. Bachmann, W. Paulus, A. Zimprich, A. Peters, C. Gieger, B. Müller-Myhsok, J. Winkelmann (München, Germany)
- 623 Withdrawn by Author**
- 624 Plasma urate in REM sleep behavior disorder**
R. Uribe-San Martín, P.F. Venegas, F.I. López, A.G. Jones, J.R. Salazar, J.F. Godoy, J.M. Santín, C. Juri (Santiago, Chile)
- 626 The impact of daytime napping on executive cognitive dysfunction in Parkinson's disease**
S.J. Bolitho, S.L. Naismith, S.J. Lewis (Sydney, Australia)
- 628 REM sleep behavior disorder after bilateral subthalamic stimulation in Parkinson's disease**
G. Ehm, Y.E. Kim, B.S. Jeon, Y.J. Jung, J.Y. Kim (Seoul, Korea)
- 629 REM sleep behavior disorder in Parkinson's disease: Association with abnormal ocular motor findings**
Y.E. Kim, B.S. Jeon, H. Park, Y.J. Jung, H.J. Kim (Seoul, Korea)
- 630 Excessive chin EMG activity during rapid eye movement sleep in Parkinson's disease: Is a marker?**
Y. Shen, K.P. Xiong, Y. Gong, X.Y. Zhang, W.D. Hu, J.M. Xu, J. Cheng, C.F. Liu (Suzhou, China)
- 631 The decrease of sleep apnea in Parkinson's disease associated with excessive electromyography (EMG) activity**
K.P. Xiong, Y. Gong, Y. Shen, Q. Tang, J.M. Xu, J. Cheng, C.F. Liu (Suzhou, China)
- 636 Worldwide record of REM sleep time in a patient with pedunculopontine nucleus area (PPNa) stimulation**
D. Neutel, D. Grabli, C. Karachi, M.L. Welter, C. Ewencyk, E. Bardinet, C. François, I. Arnulf (Paris, France)
- 643 Circadian expression profile of clock genes in early Parkinson's disease patients**
R.R. Vuono, D.P. Breen, K. Fisher, A.B. Reddy, R.A. Barker (Cambridge, United Kingdom)



Guided Poster Tours

GUIDED POSTER TOUR 5 – Dystonia

Bayside Level 1, Bayside Gallery A

12:30 – 14:00

Tuesday, June 18, 2013

Tour Leaders:

Alberto Albanese, *Milan, Italy*
Susanne Schneider, *Kiel, Germany*

- 4 Basal ganglia circuit disturbances and symptomatology in primary focal dystonia (PFD)**
B.D. Berman, M. Hallett (Aurora, CO, USA)
- 7 Generation and characterisation of mice rescuing the DYT1-knockout phenotype**
B.T. Fabry, L. Lotzer, S. Moll, J. Hettich, O. Riess, K. Grundmann, T. Ott (Tübingen, Germany)
- 9 Unraveling cellular phenotypes of novel torsinA mutations**
F. Vulinovic, P. Seibler, J. Graf, A. Ferbert, A. Rolfs, A. Schmidt, C. Klein, K. Lohmann (Lübeck, Germany)
- 27 Genome sequencing reveals a mutation in the TUBB4 gene as the cause of whispering dysphonia (DYT4 dystonia)**
K. Lohmann, R.A. Wilcox, S. Winkler, A. Ramirez, A. Rakovic, J.S. Park, J.L. Groen, M. Kasten, N. Brüggemann, A. Schmidt, F.J. Kaiser, K.R. Kumar, M. Agzarian, L.J. Ozelius, A.P.M. Langeveld, C.M. Sue, M.A.J. Tijssen, C. Klein (Luebeck, Germany)
- 28 Genome-wide association of a locus on chromosome 17 with musician's dystonia**
C. Klein, A. Schmidt, A. Schillert, S. Winkler, F. Baas, N. Brüggemann, G. Deuschl, J. Graf, L.J. Groen, J. Hagenah, H.C. Jabusch, M. Kasten, S. Schreiber, M.A.J. Tijssen, K.E. Zeuner, E. Altenmüller, A. Ziegler, K. Lohmann (Luebeck, Germany)
- 47 The phenotypic spectrum of DYT23 due to ANO3 mutations**
M. Stamelou, G. Charlesworth, C. Cordivari, S. Schneider, G. Kaegi, U. Sheerin, I. Rubio-Agusti, A. Batla, H. Houlden, N. Wood, K.P. Bhatia (London, United Kingdom)
- 49 ANO3 - A novel cause of primary dystonia**
G. Charlesworth, V. Plagnol, K.M. Holmström, J. Bras, U.M. Sheerin, E. Preza, I. Rubio-Agusti, M. Ryten, S.A. Schneider, M. Stamelou, D. Trabzuni, A.A. Abramov, K.P. Bhatia, N.W. Wood (London, United Kingdom)
- 58 Withdrawn by Author**
- 89 Development of a comprehensive cervical dystonia rating scale**
C.L. Comella, G.T. Stebbins, M. Zurowski, H.A. Jinnah, J.S. Perlmutter, T.A. Waliczek, A.R. Rosen, W. Galpern (Chicago, IL, USA)
- 95 Abnormal thalamocortical tractography in cervical dystonia**
J.L. Waugh, J.K. Kuster, S. Woodman, M.L. Makhlof, N. Makris, H.C. Brieter, T.J. Multhaupt-Buell, L.R. Sudarsky, N. Sharma, A.J. Blood (Boston, MA, USA)

GUIDED POSTER TOUR 6 – Parkinsonisms (parkinson plus and secondary)

Bayside Level 1, Bayside Gallery B

12:30 – 14:00

Tuesday, June 18, 2013

Tour Leaders:

Tove Henriksen, *Copenhagen, Denmark*
Günter Höglinger, *Munich, Germany*

- 771 Prevalence and risk factors for parkinsonism among retired Filipino boxers**
L.L. Shiong Shu, R.D.G. Jamora, P.A.D. Canto, C.P.C. Dioquino, L.K. Ledesma (Manila, Philippines)
- 781 Clinical and neuropathological features of synucleinopathy associated with G51D SNCA mutation**
A.P. Kiely, Y.T. Asi, E. Kara, P. Limousin, H. Ling, P. Lewis, C. Proukakis, N. Quinn, A. Lees, J. Hardy, T. Revesz, H. Houlden, J.L. Holton (London, United Kingdom)
- 782 Auditory cues at person-specific asymmetry and cadence improve gait stability only in people with Parkinson's disease (PD)**
M.A.D. Brodie, T.R. Beijer, S.R. Lord, C.G. Canning, J. Menant, S. Smith, R.T. Dean (Randwick, Australia)
- 788 Genetic influences of MAPT and SNCA on age at onset of Parkinson's disease**
Y. Huang, G. Wang, D. Rowe, Y. Wang, J. Kwok, Q. Xiao, F. Masterglia, J. Liu, G. Halliday, S. Chen (Sydney, Australia)
- 794 The "Lazy lid" sign supports the clinical diagnosis of progressive supranuclear palsy**
S. Lorenzl, G. Nübling (Munich, Germany)
- 796 Primary lateral sclerosis with marked supranuclear gaze palsy and postural instability but normal dopamine transporters imaging: A distinct PLS phenotype**
M. Stamelou, A. Pisani, M. Edwards, K.P. Bhatia (London, United Kingdom)
- 810 Young-onset and old-onset multiple system atrophy: Clinical comparison study**
J. Kim, M.J. Kim, Y.J. Kim, S.R. Kim, M.S. Kim, S.J. Chung (Seoul, Korea)
- 813 Why do patients with PSP fall?**
B.M. Schoneburg, M. Mancini, F.B. Horak, J.G. Nutt (Portland, OR, USA)
- 829 The role of statin use on incidence of Parkinson's disease: A meta-analysis of observational studies**
K. Undela, K. Gudala, S. Malla, D. Bansal (Mysore, India)
- 841 Selegiline rescues gait deficits and dopaminergic cells in subacute MPTP mouse model of Parkinson's disease**
Q. Zhao, Y. Bai, D. Fang (Shanghai, China)



Guided Poster Tours

GUIDED POSTER TOUR 7 –

Rating scales and assessment tools

Bayside Level 2, Bayside 201-203

12:30 – 14:00

Tuesday, June 18, 2013

Tour Leaders:

Christopher Goetz, *Chicago, IL, USA*

Cristina Sampaio, *Princeton, NJ, USA*

- 325 Fatigue in Parkinson's disease: Prevalence and associated factors**
C.M. Trase Kwok, K.F. Hui, K.Y. Wong (Hong Kong)
- 294 Prevalence of gastroparesis symptoms in patients with early Parkinson's disease**
S.L. Marrinan, A.V. Emmanuel, D.G. Grosset, D.J. Burn (Newcastle upon Tyne, United Kingdom)
- 295 Test-retest reliability of a Parkinson's disease monitoring system**
D.A. Heldman, A.J. Espay, P.A. LeWitt, J.P. Giuffrida (Cleveland, OH, USA)
- 328 Semi-automatic scoring method for torticollis by using kinect**
T. Nakamura, M. Sato, H. Kajimoto (Chofu, Japan)
- 302 A computer vision framework for finger-tapping evaluation in Parkinson's disease**
T. Khan, D. Nyholm, J. Westin, M. Dougherty (Falun, Sweden)
- 303 A web-based system for visualizing upper limb motor performance of Parkinson's disease patients**
M. Memedi, U. Bergqvist, J. Westin, D. Nyholm (Borlänge, Sweden)
- 309 Bradykinesia-akinesia incoordination test: Validating an online keyboard test of upper limb function**
A. Nagy, S. Acharya, S. Hadavi, J.P. Bestwick, J. Fearnley, A.J. Lees, G. Giovannoni, A.J. Noyce (London, United Kingdom)
- 310 The utilization of a one-leg balance task for assessing balance and disease bilaterality in people with Parkinson's disease**
B. Hu, T. Clark, S. Cihal (Calgary, AB, Canada)
- 316 Quantification of speed, amplitude and fatigue in PD**
L. Verhagen, L. van Imhoff, S. van den Munckhof, S. Gardon, B. Ouyang (Chicago, IL, USA)
- 321 BradykAn: A new reliable tool for measuring bradykinesia**
E. Ruzicka, R. Krupicka, K. Zarubova, Z. Szabo, R. Jech (Prague, Czech Republic)

GUIDED POSTER TOUR 8 –

Surgical therapy: Parkinson's disease

Bayside Level 2, Bayside 204

12:30 – 14:00

Tuesday, June 18, 2013

Tour Leaders:

Paul Krack, *Grenoble, France*

Jens Volkmann, *Wuerzburg, Germany*

- 1252 Steering deep brain stimulation: An exploratory study with a new 32-contact lead**
M.F. Contarino, L.J. Bour, R.M.A. de Bie, P. van den Munckhof, P.R. Schuurman (Amsterdam, Netherlands)
- 1260 Simultaneous targeting of STN and GPi can be useful for DBS therapy in advanced Parkinson's disease**
P. Hedera, M.K. Cooper, F.T. Phibbs, P.D. Charles, P.E. Konrad, J.S. Neimat, T.L. Davis (Nashville, TN, USA)
- 1263 Successful long-term bilateral subthalamic nucleus deep brain stimulation in VPS35 Parkinson's disease**
V. Fleury, C. Wider, J. Horvath, A. Zacharia, J. Bally, P. Pollak, C. Pollo, F.J.G. Vingerhoets, P.R. Burkhard (Geneva, Switzerland)
- 1264 A new DBS lead: Simultaneous 32-contact local field potential recording in the Parkinsonian STN**
L.J. Bour, R. Verhagen, F. Contarino, R.M.A. De Bie, G. Van Elswijk, H.C.F. Martens, P. Van den Munckhof, R. Schuurman (Amsterdam, Netherlands)
- 1266 Stimulation of electrode contacts within zona incerta directly blocks levodopa-induced dyskinesias in PD patients**
C.P. Souza, M.G.S. Ghilardi, R.G. Cury, R.B.M. Rodrigues, E.R. Barbosa, M.J. Teixeira, E.T. Fonoff (São Paulo, Brazil)
- 1268 Different combinations of subthalamic nucleus (STN) and pedunculopontine nucleus (PPN) deep brain stimulation (DBS) lead to variable effects in saccades and antisaccades in advanced Parkinson's disease (PD)**
M.J. Naushahi, A.N. Khan, Q. Arshad, P.Y. Lee, S. Khalid, N. Yousif, N. Pavese, P.G. Bain, A.M. Bronstein, D. Nandi (Cambridge, United Kingdom)
- 1269 The impact of age at surgery on long term outcome of bilateral STN-DBS**
A. Shalash, A. Alexoudi, K. Knudsen, J. Volkmann, M. Mehdorn, G. Deuschl (Cairo, Egypt)
- 1274 Influence of speech task and utterance length on measurement of pitch variability in the speech of Parkinson's disease patients after deep brain stimulation**
J. van Doorn, F. Karlsson (Umeå, Sweden)
- 1288 Parkinson study group survey of impulsive and compulsive disorders in Parkinson's disease pre and post deep brain stimulation**
N. Hack, A. Thompson-Avila, E. Moro, M. York, K. Nestor, S. Fayad, H. Ward, M. Okun (Gainesville, FL, USA)
- 1318 Practice change in DBS target for Parkinson's disease 2010-2012: Influence of the VA/NIH cooperative study #468**
M. San Luciano, N. Galifianakis, C. Racine, L. Markun, P. Starr, P. Larson, R. Taylor, W. Marks, Jr., M. Katz, K. Mills, M. Volz, J. Ostrem (San Francisco, CA, USA)



Guided Poster Tours

GUIDED POSTER TOUR 9 – Parkinson's disease: Cognition

Bayside Level 1, Bayside Gallery A

12:00 – 13:30

Wednesday, June 19, 2013

Tour Leaders:

Murat Emre, *Istanbul, Turkey*

Jennifer Goldman, *Chicago, IL, USA*

- 505 Characterising mild cognitive impairment in incident Parkinson's disease: The ICICLE-PD study**
A.J. Yarnall, D.P. Breen, G.W. Duncan, R.A. Barker, D.J. Burn (Newcastle-upon-Tyne, United Kingdom)
- 508 The relationship between small vessel disease (SVD), vascular risk factors (VRFs) and motor and cognitive impairment in Parkinson's disease (PD): A clinicopathological study**
R.S. Schwartz, G.M. Halliday, D.J. Cordato, J.J. Kriil (Sydney, Australia)
- 512 The neuropsychological domain differences between Parkinson's disease patients with and without mild cognitive impairments; a longitudinal investigation**
P. Hobson, J. Meara (Rhyl, United Kingdom)
- 519 Evaluation of driving ability in patients with Parkinson's disease using a driving simulator**
R. Andoh, W.T. Kyaw, T. Tsujii, H. Iwaki, N. Nishikawa, M. Nagai, M. Nomoto (Tohon, Japan)
- 526 Relationships between non-motor symptoms in Parkinson's disease, and their genetic and pathologic basis**
G. Wang, Y. Huang, W. Chen, S. Chen, Y. Wang, Q. Xiao, J. Liu, P. Sachdev, V.S.C. Fung, D. Rowe, G. Halliday, S. Chen (Sydney, Australia)
- 531 Motor timing in Parkinson's disease patients who freeze**
C.M. Tolleson, S.A. Wylie, O.C. Roman, S. Barton, M. Kubovy, D. Claassen (Nashville, TN, USA)
- 533 Fronto-striatal atrophy correlates of inhibitory dysfunction in Parkinson's disease**
C. O'Callaghan, S.L. Naismith, J.R. Hodges, S.J.G. Lewis, M. Hornberger (Sydney, Australia)
- 550 Principal component analysis of PiB distribution in Parkinson's and Alzheimer's diseases**
M.C. Campbell, J. Markham, H. Flores, J.M. Hartlein, A.M. Goate, N.J. Cairns, T.O. Videen, J.S. Perlmutter (Saint Louis, MO, USA)
- 559 Functional MRI abnormalities on cognitive tasks in newly diagnosed PD patients- ICICLE-PD study**
C. Nombela, J.B. Rowe, A. Hampshire, A.M. Owen, D. Breen, T.K. Khoo, M. Firbank, A. Yarmall, G. Duncan, S. Winder-Rhodes, J.T. O'Brien, D.J. Burn, D.J. Brooks, R.A. Barker (Cambridge, United Kingdom)
- 562 Mild cognitive impairment in Parkinson's disease: Cut-off and responsiveness values of the Parkinson's disease-cognition rating scale (PD-CRS)**
J. Pagonabarraga, R. Fernández de Bobadilla, S. Martínez-Horta, B. Pascual-Sedano, A. Campolongo, J. Kulisevsky (Barcelona, Spain)

GUIDED POSTER TOUR 10 – Genetics

Bayside Level 1, Bayside Gallery B

12:00 – 13:30

Wednesday, June 19, 2013

Tour Leaders:

Christine Klein, *Luebeck, Germany*

Daniel Healy, *Dublin, Ireland*

- 1107 Paroxysmal kinesigenic dyskinesia and PRRT2 mutations: Clinico-genetic correlations**
K. Methawasini, E.W.L. Teng, A.R.J. Ng, S.H. Seah, W.L. Au, J.J. Liu, J.N. Foo, Y. Zhao, E.K. Tan, L.C.S. Tan (Nakorn-Nayok, Thailand)
- 1110 Phenotypic spectrum of mutations in GNAL: A novel cause of cranio-cervical dystonia**
K.R. Kumar, K. Lohmann, R. Miyamoto, A. Ferbert, T. Lohmann, M. Kasten, J. Hagenah, N. Brueggemann, J. Graf, A. Muenchau, V.S. Kostic, C.M. Sue, A.R. Domingo, R.L. Rosales, L.V. Lee, Y. Mukai, T. Kawarai, R. Kaji, C. Klein, A. Schmidt (Lübeck, Germany)
- 1117 Clinical features of onset in monogenic Parkinson's disease**
A.E. Elia, J. Azzollini, C. Bagella, M. Carecchio, C. Barzaghi, B. Garavaglia, A. Albanese (Milan, Italy)
- 1123 SPG11 sequencing in worldwide populations of familial and sporadic spastic paraplegia patients reveals frequent mutations and the common association of parkinsonian features**
E. Kara, L. Schottlaender, A. Berardo, R. Reisin, J. Hehir, D. Hughes, R. Paudel, J. Hersheson, Y.T. Liu, E. Preza, P. Lewis, A. Martin, P. Korlipara, K.P. Bhatia, A. Lees, T. Foltynie, N. Wood, J. Hardy, H. Houlden (London, United Kingdom)
- 1130 Behavioral characteristics of asymptomatic G2019S mutation carriers of the LRRK2 gene**
A. Thaler, A. Mirelman, K. Yasinovskii, M. Zalis, A. Shkedy, A. Hilel, K. Marder, S. Bressman, A. Orr-Urtreger, T. Gurevich, N. Giladi (Tel-Aviv, Israel)
- 1132 New insights into the genetics of X-linked dystonia-parkinsonism**
A. Domingo, A. Westenberger, R. Rosales, R.D. Jamora, P.M. Pasco, K. Lohmann, L.V. Lee, C. Klein (Lübeck, Germany)
- 1137 PRRT2 gene mutation analysis in Korean familial and sporadic patients with paroxysmal kinesigenic dyskinesia**
J. Youn, Y. Jeong, J.Y. Ahn, J.W. Cho (Seoul, Korea)
- 1162 DRD3 receptor polymorphism may confer risk for younger onset Parkinson's disease**
A. Hassan, M.S. Okun, D.J. Serie, M.G. Heckman, J.E. Ahlskog, R.J. Uitti, Z. Wszolek, O.A. Ross (Rochester, MN, USA)
- 1167 Withdrawn by Author**
- 1168 A novel heterozygous mutation in ATP synthase (electron transport chain complex V) subunit c gene ATP5G3 causes autosomal dominant dystonia and spastic paraplegia**
D.L. Gilbert, N.D. Leslie, R.B. Hufnagel, D.E. Neilson (Cincinnati, OH, USA)



Guided Poster Tours

GUIDED POSTER TOUR 11 – Lewy body dementia and other dementias in movement disorders

Bayside Level 2, Bayside 201-203

12:00 – 13:30

Wednesday, June 19, 2013

Tour Leaders:

John Dalrymple-Alford, *Christchurch, New Zealand*
Glenda Halliday, *Randwick, Australia*

- 501 Meta analysis: Donepezil in the treatment of cognitive impairment dementia in patients with Parkinson's disease**
E.A. Barcelon, L. Shiong Shiu, P.M.D. Pasco (Manila, Philippines)
- 1179 Metabolic impairments of brain in patients with probable dementia of lewy bodies**
Y. Yang, S. Kim (Seoul, Korea)
- 1180 Omi-mediated detoxification of α -synuclein-induced neurotoxicity in a drosophila model of Parkinson's disease**
M.M. Rahman, S. Akhter, M.S. Islam, H.J. Kim, S.T. Hong (Jeonju-si, Korea)
- 516 Cognitive impairment after deep brain stimulation: A follow-up study and influence of age**
E. Herrera, S. González, R. Merino, R. Ribacoba, E. Suárez, F. Cuetos (Oviedo, Spain)
- 522 Cognitive function and postural instability in people with Parkinson's disease**
D. Xu, M. Cole, K. Mengersen, P. Silburn, G. Kerr (Brisbane, Australia)
- 525 Criteria for mild cognitive impairment in Parkinson's disease: Applicability and validity**
G.J. Geurtsen, B.A. Schmand, I. Litvan, J.G. Goldman, A.I. Tröster (Amsterdam, Netherlands)
- 528 Could depression confound performance on neuropsychological testing in Parkinson's disease (PD) patients?**
T.P. Lin, J.N. Caviness, J.G. Hentz, S.A. Jacobson, C.M. Belden, M.N. Sabbagh, H.A. Shill, E.D. Driver-Dunckley, T.G. Beach, C.H. Adler, Arizona Parkinson Disease Consortium (Scottsdale, AZ, USA)
- 549 Pathological organization of resting-state functional brain networks in Parkinson's disease: A longitudinal MEG graph theoretical analysis**
K.T.E. Olde Dubbelink, A. Hillebrand, D. Stoffers, J.B. Deijnen, J.W.R.W. Twisk, C.J. Stam, H.W. Berendse (Amsterdam, Netherlands)
- 558 Object / scene recognition in patients with Parkinson's disease with and without visual hallucination**
P. Maruque, F. Ory, L. Saint-Aubert, F. Remy, N. Bacon-Macé, M. Fabre-Thorpe, E.J. Barbeau, C. Brefel-Courbon (Toulouse, France)
- 568 The prevalence and nature of mild cognitive impairment in Parkinson's disease (PD-MCI) identified using automated cognitive tests**
K.A. Wesnes, D.J. Burn (Goring on Thames, United Kingdom)

GUIDED POSTER TOUR 12 – Surgical therapy of movement disorders other than Parkinson's disease

Bayside Level 2, Bayside 204

12:00 – 13:30

Wednesday, June 19, 2013

Tour Leaders:

Joachim Krauss, *Hannover, Germany*
Elena Moro, *Grenoble, France*

- 1217 Withdrawn by Author**
- 1224 Effect of spinal cord stimulation on gait with patients with PSP**
T. Ichikawa, H. Oshima, Y. Fumimura, Y. Nishida (Ageo City, Japan)
- 1225 Influence of electrode position and outcome following deep brain stimulation surgery in the management of childhood primary and secondary dystonias**
D.E. Lumsden, J. Ashmore, H. Gimeno, R. O'Gorman, G. Charles-Edwards, K. Ashkan, R. Selway, J.P. Lin (London, United Kingdom)
- 1228 A new procedure of selective denervation and myotomy for laterocollis cervical dystonia: Results in 66 cases**
J. Liang, S. Ji, A. Ma (Wuhan, China)
- 1229 Long-term follow-up study for patients with primary generalized dystonia treated by bilateral pallidal stimulation**
M. Sobstyl, M. Zabek, Z. Mossakowski (Warsaw, Poland)
- 1234 Long-term follow-up of GPi deep brain stimulation in generalized dystonia: Primary dystonia compared to cerebral palsy**
L.M. Romito, G. Zorzi, M.L. Ciceri, C.E. Marras, A. Franzini, N. Nardocci, A. Albanese (Milan, Italy)
- 1235 Long-term follow up of chronic spinal cord stimulation in medically intractable orthostatic tremor**
T. Sauer, C. Blahak, G. Luetjens, A. Saryyeva, H. Baezner, H.H. Capelle, J.C. Woehrle, M.G. Hennerici, J.K. Krauss (Mannheim, Germany)
- 1242 Deep brain stimulation of the caudal zona incerta and the posterior subthalamic area in essential tremor, is there an optimal area for stimulation?**
A. Fytagoridis, M. Åström, P. Blomstedt (Stockholm, Sweden)
- 1245 Causes of therapeutic failure of pallidal deep brain stimulation in primary dystonia**
K.A.M. Pauls, J.K. Krauss, C.E. Kämpfer, C. Schrader, M. Südmeyer, N. Allert, R. Benecke, C. Blahak, J.K. Boller, W. Fogel, F. El Majdoub, J. Kessler, J. Kuhn, J. Voges, M. Wittstock, A.A. Kühn, E. Moro, J. Volkmann, K.P. Bhatia, M. Maarouf, L. Timmermann (Köln, Germany)
- 1247 Gammaknife thalamotomy for intractable tremors: Clinical outcome and correlations with neuroimaging features**
T. Witjas, R. Carron, J.P. Azulay, J. Regis (Marseille, France)



Guided Poster Tours

GUIDED POSTER TOUR 13 – Huntington's disease

Bayside Level 1, Bayside Gallery A

13:00 – 14:30

Thursday, June 20, 2013

Tour Leaders:

Elizabeth McCusker, *Westmead, Australia*
Ralf Reilmann, *Muenster, Germany*

- 751** **Mutant huntingtin impair mitochondrial movement and trafficking in hippocampal neurons**
B. Zhang, J. Tian, Y. Yan (Hangzhou, China)
- 754** **Withdrawn by Author**
- 756** **Withdrawn by Author**
- 757** **FTY720 is neuroprotective in Huntington's disease**
V. Maglione, A. Di Pardo, E. Amico, M. Favellato, R. Castrataro, S. Fucile, F. Squitieri (Pozzilli, Italy)
- 758** **Abnormal implicit prediction in rhythmical saccadic movement of manifest Huntington patients: A 12 months longitudinal study**
E.A. Toh, M. MacAskill, J. Dalrymple-Alford, D. Myall, S. MacLeod, L. Livingston, T. Anderson (Christchurch, New Zealand)
- 764** **Changes in cerebral vasculature in patients with Huntington's disease**
J. Drouin-Ouellet, I. Saint-Amour, W.L. Kuan, M. Saint-Pierre, R.A. Barker, F. Cicchetti (Cambridge, United Kingdom)
- 765** **The pharmacokinetics of extended release SD-809, a deuterium-substituted analogue of tetrabenazine**
D.A. Stampler, F. Brown, M. Bradbury (La Jolla, CA, USA)
- 767** **Quantifying Huntington's disease (HD) burden internationally**
J. Dorey, F. Squitieri, C. Verny, D. Zielonka, J. Cohen, M. Tuomi (Lyon, France)
- 768** **Potential neuroprotective effects of pridopidine in Huntington's disease**
A. DiPardo, V. Maglione, M.G. Favellato, E. Amico, F. Squitieri (Pozzilli, Italy)
- 769** **Model-based meta-analysis (MBMA) of UHDRS-Total motor score in Huntington's disease (HD) clinical trials**
Y. Jin, S. Ahadieh, S. Papapetropoulos, J. Liu (Cambridge, MA, USA)

GUIDED POSTER TOUR 14 – Parkinson's disease: Clinical trials

Bayside Level 1, Bayside Gallery B

13:00 – 14:30

Thursday, June 20, 2013

Tour Leaders:

Jeffrey Kordower, *Chicago, IL, USA*
Robert Hauser, *Tampa, FL, USA*

- 383** **Withdrawn by Author**
- 389** **Efficacy of rasagiline 1mg/day on key motor symptoms of early Parkinson's disease: Post-hoc analysis from the Attenuation of Disease progression with Azilect® Given Once-daily (ADAGIO) study**
E. Tolosa (Barcelona, Spain)
- 395** **Zonisamide improves wearing-off in Parkinson's disease: A nation-wide randomized, double-blind study**
M. Murata, K. Hasegawa, J. Fukasaka, K. Kochi, I. Kanazawa, T. The Japan Zonisamide on PD Study Group (Tokyo, Japan)
- 404** **Malignant melanoma in early treated Parkinson's disease: The NET-PD trial**
R. Constantinescu, E.F. Augustine, P. Auinger, S. Sharma, L. Khadim, K. Kiebertz (Rochester, NY, USA)
- 442** **Exercise for falls prevention in Parkinson's disease: A randomised controlled trial**
C.G. Canning, C. Sherrington, S.R. Lord, J.C.T. Close, G. Heller, S. Heritier, K. Howard, N.E. Allen, S.S. Paul, S.M. Murray, S.D. O'Rourke, V.S.C. Fung (Sydney, Australia)
- 444** **A phase 2, placebo-controlled, randomized, double-blind trial of tozadenant (SYN-115) in patients with Parkinson's disease with wearing-off fluctuations on levodopa**
R.A. Hauser, C.W. Olanow, K. Kiebertz, A. Neale, C. Resburg, U. Maya, S. Bandak (Tampa, FL, USA)
- 446** **A placebo controlled, randomized, double-blind study to assess the safety and clinical benefit of rasagiline as an add-on to dopamine agonist monotherapy in early Parkinson's disease (PD): The ANDANTE study**
R.A. Hauser, D. Silver, A. Choudhry, S. Isaacson (Tampa, FL, USA)
- 452** **Constant therapeutic levodopa (LD) plasma concentrations maintained by continuous subcutaneous (SC) administration of ND-0612, a novel formulation of LD/carbidopa (CD)**
Y. Caraco, S. Oren, P. LeWitt (Ness Ziona, Israel)
- 468** **Impact of droxidopa treatment in patients with Parkinson's disease and symptomatic neurogenic orthostatic hypotension (study 306)**
S.H. Isaacson, R.A. Hauser, C.B.N. Szakacs, C.C. Cioffi (Boca Raton, FL, USA)
- 499** **Sustained-release carbidopa-levodopa (accordian pill) in patients with advanced Parkinson's disease: Pharmacokinetic and clinical experience**
P. LeWitt, H. Friedman, N. Giladi, T. Gurevich, H. Shabtai, R. Djaldetti, N. Roizen, S. Hassin-Baer, O. Cohen, G. Yahalom, I. Schlessinger, M. Nassar, R. Milo, M. Anka, P. Farkas, N. Navon (West Bloomfield, MI, USA)



Guided Poster Tours

GUIDED POSTER TOUR 15 – Parkinson's disease: Phenomenology

Bayside Level 2, Bayside 201-203

13:00 – 14:30

Thursday, June 20, 2013

Tour Leaders:

Timothy Lynch, *Dublin, Ireland*
David Riley, *South Euclid, OH, USA*

- 860 Tract-based spatial statistics and voxel based analysis in Parkinson's disease patients with freezing of gait**
J. Youn, Y. Jeong, J.Y. Ahn, J.W. Cho (Seoul, Korea)
- 862 Ancillary investigations to diagnose Parkinson's disease and atypical Parkinsonism: A prospective clinical study**
M.B. Aerts, R.A.J. Esselink, W.F. Abdo, F.J.A. Meijer, M.M. Verbeek, B.R. Bloem (Nijmegen, Netherlands)
- 866 Synergic and independent influences of MAPT and SNCA on the motor decline in Parkinson's disease**
G. Wang, S. Chen, Y. Wang, Q. Xiao, J. Liu, S. Chen, Y. Huang (Sydney, Australia)
- 878 Bedside test facilitates differentiation between PISA and scoliosis in PD patients**
F. Gandor, D. Gruber, G. Ebersbach (Beelitz-Heilstätten, Germany)
- 880 A cluster analysis on newly diagnosed untreated PD patients**
R. Erro, C. Vitale, M. Picillo, M. Amboni, P. Barone (Naples, Italy)
- 886 Is carrying the G2019S mutation in the leucine-rich repeat kinase 2 gene associated with a different rate of progression of Parkinson's disease?**
G. Yahalom, Y. Orlev, O.S. Cohen, R. Inzelberg, E. Kozlova, E. Friedman, U. Goldbourt, S. Hassin-Baer (Tel-Hashomer, Israel)
- 889 FBX07 mutation: Phenotypic variability from chorea to early-onset asymmetric parkinsonism within a family**
A. Gunduz, A. Gündogdu Eken, K. Bilgüvar, M. Günel, A.N. Basak, H. Hanagasi, S. Ertan (Istanbul, Turkey)
- 890 Motor and cognitive features discriminate new fallers from non-fallers in an incident cohort of Parkinson's disease**
B. Galna, S. Lord, D. Mhiripiri, D. Burn, L. Rochester (Newcastle upon Tyne, United Kingdom)
- 904 Subthreshold depression and subjective cognitive complaints in Parkinson's disease**
G. Santangelo, C. Vitale, L. Trojano, M.G. Angrisano, M. Picillo, D. Errico, V. Agosti, D. Grossi, P. Barone (Caserta, Italy)
- 909 Increased activation of the frontal lobe is associated with freezing of gait in patients with Parkinson's disease: An fNIRS study**
I. Maidan, H. Bernad-Elazari, E. Gazit, M. Brozgol, N. Giladi, A. Mirelman, J.M. Hausdorff (Tel-Aviv, Israel)

GUIDED POSTER TOUR 16 – Tremor

Bayside Level 2, Bayside 204

13:00 – 14:30

Thursday, June 20, 2013

Tour Leaders:

Mark Edwards, *London, United Kingdom*
Barry Snow, *Auckland, New Zealand*

- 939 Sensitivity to change of the essential tremor rating assessment scale (TETRAS)**
B. Voller, E. Lines, G. McCrossin, A. Artilles, S. Tinaz, C. Lungu, M. Hallett, D. Haubenberger (Bethesda, MD, USA)
- 941 Continuous home monitoring of essential tremor using motion sensors**
D. Heldman, C. Pulliam, S. Eichenseer, C. Goetz, O. Waln, C. Hunter, J. Jankovic, D. Vaillancourt, J. Giuffrida (Cleveland, OH, USA)
- 947 Patients with scans without evidence of dopaminergic deficit (SWEDD) do not have Parkinson's disease- A long term follow up study**
A. Batla, M. Stamelou, K.P. Bhatia (London, United Kingdom)
- 948 Alcohol responsiveness in different tremor disorders**
P. Schwingsenschuh, M. Koegl-Wallner, U. Werner, C. Ghadery, T. Pendl, S. Seiler, K. Wenzel, R. Schmidt, P. Katschnig-Winter (Graz, Austria)
- 949 Lateralization of structural abnormalities in right cerebellum in essential tremor: An observation from voxel based morphometry study**
K. Bhalsing, N. Upadhyay, R. Yadav, J. Saini, A. Gupta, P. Pal (Bangalore, India)
- 954 Movement disorders associated with chronic lymphocytic inflammation with pontine perivascular enhancement responsive to steroids (CLIPPERS)**
A.D. Ha, J.D. Parratt, S. Babu, S.D. Kim, N. Mahant, V.S.C. Fung (Westmead, Australia)
- 957 Diagnosing postural tremor using intermuscular coherence and cumulant analysis**
A.M.M. van der Stouwe, L. Woudt, J.W. Elting, M.A.J. de Koning-Tijssen, N.M. Maurits (Groningen, Netherlands)
- 958 Spatiotemporal parameters from three-dimensional tremor analysis may help to differentiate essential tremor from parkinsonian tremor**
C. Blahak, T. Sauer, M.E. Wolf, J.C. Wöhrle, M.G. Hennerici (Mannheim, Germany)
- 976 Tremor retraining as therapeutic strategy for patients with psychogenic tremor: A proof-of-concept study**
A.J. Espay, G. Oggioni, M.J. Edwards, N. Phielipp, H. Gonzalez-Usigli, C. Pecina, D.A. Heldman, J. Mishra, A.E. Lang (Cincinnati, OH, USA)
- 978 Ataxia is common in patients with orthostatic tremor**
D. Bhatti, C. Srikanth-Mysore, J. Bertoni, D. Torres-Russotto (Omaha, NE, USA)



Abstracts by Topic

Dystonia

- 1 Botulinum toxin treatment for blepharospasm**
A. Faust-Socher, G. Yahalom, H. Strauss, S. Lerman, L. Ephraty, Y. Orlev, E. Kozlova, S. Hassin-Baer, O.S. Cohen (Tel-Hashomer, Israel)
- 2 A patient with probable dopa responsive dystonia having features of spastic paraparesis**
H. Apaydin, B. Zeydan, A. Gunduz (Istanbul, Turkey)
- 3 Depression among patients with X-linked dystonia Parkinsonism**
A.R.F. Cenina, V.P.C. Dela Llana, A.R. Domingo, R.D.G. Jamora, P.V. Lee, L.V. Lee (Manila, Philippines)
- 4 Basal ganglia circuit disturbances and symptomatology in primary focal dystonia (PFD)**
B.D. Berman, M. Hallett (Aurora, CO, USA)
- 5 Cervical dystonia: Effectiveness of a standardized physical therapy program; study design and protocol of a single blind randomized controlled trial**
J.V.D. Dool, B. Visser, J.H.T.M. Koelman, R.H.H. Engelbert, M.A.J. Tijssen (Amsterdam, Netherlands)
- 6 Dystonia DBS in Iran**
M. Parvaresh-Rizi, M. Saadati, G. Shahidi, M. Saatian, M. Rohani (Tehran, Iran)
- 7 Generation and characterisation of mice rescuing the DYT1-knockout phenotype**
B.T. Fabry, L. Lotzer, S. Moll, J. Hettich, O. Riess, K. Grundmann, T. Ott (Tübingen, Germany)
- 8 The role of autophagy in degradation of Torsin A and Torsin B**
V. Palada, K. Grundmann (Tübingen, Germany)
- 9 Unraveling cellular phenotypes of novel torsinA mutations**
F. Vulinovic, P. Seibler, J. Graf, A. Ferbert, A. Rolfs, A. Schmidt, C. Klein, K. Lohmann (Lübeck, Germany)
- 10 Multiple target DBS for general dystonia treatment**
B. Brodacki, H. Koziara, T. Mandat (Warszawa, Poland)
- 11 Dystonia- Various symptoms and targets for deep brain stimulation**
T. Mandat, H. Koziara, B. Brodacki, D. Koziarowski, W. Bonicki, P. Nauman, T. Kmiec (Warszawa, Poland)
- 12 Screening of TOR1A gene in Brazilian dystonia patients**
L.G. Piovesana, L.S. Campos, P.C. Azevedo, M. França, Jr., F.R. Torres, Í.T. Lopes-Cendes, A. D'Abreu (Campinas, Brazil)
- 13 Validation of a PCR-based test for the genetic diagnosis of Filipino patients with X-linked dystonia Parkinsonism (XDP)**
P.D. Pasco, T. Kawarai, L. Silao, L. Lee, R. Kaji (Manila, Philippines)
- 14 The relationships of motor and non-motor features in cervical dystonia**
S.R. Eichenseer, G.T. Stebbins, C.L. Comella (Chicago, IL, USA)
- 15 Using ultrasonography (U/S) to define individual muscle bundles of finger flexors and extensors to improve accuracy of botulinum toxin (BoNT) injections**
E.C.H. Lim, J.H. Yik, A.Y.T. Lim, E.Y.T. Lee, A.E.J. Cheah (Singapore)
- 16 Dynamic cortical grey matter changes in cervical dystonia**
C.C.S. Delnooz, J.W. Pasman, B.P.C. van de Warrenburg (Nijmegen, Netherlands)
- 17 Long term efficacy and safety of botulinum toxin type A in cervical dystonia patients treated over 10 years**
F. Morgante, C. Allegra, G. Majorana, M. Buccafusca, P. Girlanda (Messina, Italy)
- 18 Saccade-related modulation of beta oscillation in the human internal globus pallidus**
A. Yugeta, W.D. Hutchison, R. Chen (Tokyo, Japan)
- 19 Sensory tricks (corrective maneuvers) in cervical dystonia**
N. Patel, J. Hanfelt, L. Marsh, J. Jankovic, For the Dystonia Coalition Investigators (Houston, TX, USA)
- 20 Parieto-motor functional connectivity in primary adult-onset cervical dystonia**
P. Porcacchia, F.J. Palomar, M.T. Cáceres-Redondo, F. Carrillo, G. Koch, P. Mir (Sevilla, Spain)
- 21 Withdrawn by Author**
- 22 Neuronal analysis and motor-phenotypical characterization of a transgenic rat model for DYT1 dystonia**
V. Gaiser, L. Lotzer, T. Roenisch, B. Fabry, S. Moll, L. Clemens, M. Walter, J. Magg, J. Hübener, O. Rieß, T. Ott, K. Grundmann-Hauser (Tuebingen, Germany)
- 23 Abnormal somatosensory mismatch negativity in cervical dystonia**
J.C.A. Chen, B. Hoffland, B.V. Warrenburg, A. Sadnicka, C.H. Tsai, J.C. Rothwell, M.J. Edwards (London, United Kingdom)
- 24 Is increased blinking part of the clinical spectrum of BSP?**
A. Conte, G. Defazio, G. Ferrazzano, M. Hallett, A. Macerollo, G. Fabbrini, A. Berardelli (Rome, Italy)
- 25 Coherence of neuronal firing of the striatum and the entopeduncular nucleus with motor cortex oscillatory activity in the 6-OHDA rat model of Parkinson's disease with levodopa-induced dyskinesia**
X. Jin, K. Schwabe, J.K. Krauss, M. Alam (Hannover, Germany)
- 26 Cervical spine disease presenting with cervical dystonia**
N. Kumar, B. Kumar, R. Kumar, Z.A. Azad (Patna, India)
- 27 Genome sequencing reveals a mutation in the TUBB4 gene as the cause of whispering dysphonia (DYT4 dystonia)**
K. Lohmann, R.A. Wilcox, S. Winkler, A. Ramirez, A. Rakovic, J.S. Park, J.L. Groen, M. Kasten, N. Brüggemann, A. Schmidt, F.J. Kaiser, K.R. Kumar, M. Agzarian, L.J. Ozelius, A.P.M. Langeveld, C.M. Sue, M.A.J. Tijssen, C. Klein (Luebeck, Germany)
- 28 Genome-wide association of a locus on chromosome 17 with musician's dystonia**
C. Klein, A. Schmidt, A. Schillert, S. Winkler, F. Baas, N. Brüggemann, G. Deuschl, J. Graf, L.J. Groen, J. Hagenah, H.C. Jabusch, M. Kasten, S. Schreiber, M.A.J. Tijssen, K.E. Zeuner, E. Altenmüller, A. Ziegler, K. Lohmann (Luebeck, Germany)
- 29 First case of bilateral pallidal stimulation for DYT4 dystonia**
C.A. Airey, A.C. Lehn, R.A. Wilcox, J. O'Sullivan, R. Boyle (Brisbane, Australia)
- 30 Deep brain stimulation for DYT3 dystonia: A case report**
A.C. Lehn, C.A. Airey, J. O'Sullivan, R. Boyle (Brisbane, Australia)
- 31 Morphometric changes in task- and non-task-specific focal dystonias: A comparative analysis**
R.A. Ramdhani, M. Choy, M. Velickovic, S.J. Frucht, M. Tagliati, K. Simonyan (New York, NY, USA)
- 32 Non-invasive cerebellar stimulation in focal dystonia**
L.V. Bradnam, M.N. McDonnell, M.C. Ridding (Adelaide, Australia)
- 33 The clinical spectrum of laryngeal dystonia includes dystonic cough: Observations of a large series**
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- 34 Dystonia coalition: The first 2 years of a multicenter study**
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- 35 Botulinum toxin A injections are an effective treatment of dystonic head tremor**
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M. Katz, M. San Luciano, J.L. Ostrem (San Francisco, CA, USA)
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- 38 Voxel-based morphometry of the whole brain in patients with primary craniocervical dystonia**
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- 40 Focal dystonia as initial manifestation of Creutzfeldt-Jakob disease (CJD)**
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- 84 Improvement of post-traumatic segmental dystonia after correction of improperly placed dental implant**
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- 88 Levodopa-responsive camptocormia in a patient without DRD mutation and a normal DaT scan: Report of an unusual case**
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- 95 Abnormal thalamocortical tractography in cervical dystonia**
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- 98 Deep brain stimulation for NBIA-related dystonia**
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- 99 Withdrawn by Author**
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- 148 The degeneration of dopaminergic system in LRRK2 G2385R patients is distinct from idiopathic Parkinson's disease patients-Evidences from 18F-DTBZ PET imaging**
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- 152 Evaluating phenoconversion to PD in the PARS prodromal cohort**
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- 153 Diffusion tensor imaging in late onset neurodegeneration with brain iron accumulation**
S.O. Shah, H. Mehta, R. Fekete (Valhalla, NY, USA)
- 154 DaTSCAN™ (loflupane I 123 injection) in diagnosis of early Parkinsonian syndromes (PS)**
N. Bajaj, D.G. Grosset, R.A. Hauser, J. Seibyl, K. Marek, I.D. Grachev (Nottingham, United Kingdom)
- 155 123-I ioflupane SPECT measures of Parkinson's disease progression in the Parkinson Progression Marker Initiative (PPMI) trial**
J.P. Seibyl, D. Jennings, I.D. Grachev, C. Coffey, K.L. Marek (New Haven, USA)
- 156 White matter atrophy in Parkinson patients with freezing of gait: A diffusion kurtosis imaging study**
S. Vercruyssen, I. Leunissen, N. Wenderoth, W. Vandenberghe, S.P. Swinnen, A. Nieuwboer (Leuven, Belgium)
- 157 Differentiation of tremor disorders with fMRI: A novel quantitative approach**
S. Sharifi, W. Mugge, F. Luft, A.C. Schouten, T.H. Heida, L.J. Bour, A.F. van Rootselaar (Amsterdam, Netherlands)
- 158 Identifying tremor associated brain regions in essential tremor – An EMG-fMRI study**
A.W.G. Buijink, M. Broersma, A.M.M. van der Stouwe, N.M. Maurits, A.F. van Rootselaar (Amsterdam, Netherlands)
- 159 Detection of intracellular iron using hyperspectral fluorescence imaging in a model of Parkinson's disease**
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- 160 Essential tremor has alterations in regional glucose metabolism and GABAergic system**
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- 161 Examining expression of phosphodiesterase 10A (PDE10A) in Huntington's disease using 18F-MNI-659 PET**
D. Jennings, S. Papapetropoulos, W.N. Rikki, O. Barret, J.H. Friedman, D. Russell, G. Tamagnan, D. Alagille, J. Seibyl, K. Marek (New Haven, CT, USA)
- 162 White matter lesions and depression in patients with Parkinson's disease**
I.N. Petrovic, E. Stefanova, D. Kozic, R. Semnic, V. Markovic, N. Dragasevic, V.S. Kostic (Belgrade, Serbia)
- 163 Dopamine transporter (DaT) scan utilization in a movement disorder center: The Cleveland Clinic experience in the first 17 months**
S. Oravivattanakul, L. Benchaya, S. Cooper, A. Ahmed, I. Itin, M. Gostkowski, J. Rudolph, H.H. Fernandez (Cleveland, OH, USA)
- 164 Striatal dopamine depletion and cortical dopamine receptor changes in Parkinson's disease with mild cognitive impairment**
L.M. Christopher, C. Marras, S. Duff-Canning, R. Chen, I. Boileau, Y. Koshimori, A.E. Lang, S. Houle, A.P. Strafella (Toronto, ON, Canada)
- 165 Therapeutic occupancy of the D2/3-preferring dopamine receptor agonist pramipexol in brains of patients with Parkinson's disease ([18F]-fallypride PET study)**
A. Deuschländer, K. Bötzel, C. La Fougere, G. Xiong, G. Gründer, P. Cumming (Munich, Germany)
- 166 Correlation of dopamine transporter imaging with parkinsonian motor handicap**
T. Stojkovic, E. Stefanova, L. Brajkovic, V.S. Kostic (Belgrade, Serbia)
- 167 Subcortical gray matter volumes in Parkinson's disease (PD) and their relationship to clinical measures**
J. Hedeman, T. Krmptich, E. Shelton, J. Tanabe, B.D. Berman, (Aurora, CO, USA)
- 168 Psychogenic Parkinsonism: Does dopamine transporter imaging influence management?**
C.C. Umeh, Z. Szabo, G.M. Pontone, Z. Mari (Baltimore, MD, USA)
- 169 Dopaminergic modulation of the resting-state sensori-motor network in drug-naïve patients with Parkinson's disease**
R. De Micco, A. Tessitore, A. Paccone, A. Giordano, R. Conforti, G. Pignataro, L. Annunziato, F. Esposito, G. Tedeschi (Naples, Italy)
- 170 Uncertainty influences in obsessive-compulsive disorder**
D. Guehl, J.Y. Rotge, N. Langbour, B. Dilharreguy, B. Bordessoules, B. Bioulac, C. Martin-Guehl, N. Jaafari, B. Aouzerate, M. Allard, P. Burbaud (Pessac, France)
- 171 Functional MRI study on network abnormalities of cortical and subcortical gait control in Parkinson's disease**
S.A. Yusuf, N. Bajaj, D.P. Auer, S.T. Schwarz (Nottingham, United Kingdom)
- 172 Therapy mediated speech motor processing investigated by MRI, fMRI and spectrogram**
S. Gudwani, M. Behari, M. Saxena, S.S. Kumaran (New Delhi, India)
- 173 Initial human PET studies with [18F]PR04.MZ for quantification of striatal and extrastriatal dopamine transporters**
V. Kramer, C. Juri, P. Chana, R. Pruzzo, M. Piel, A. Amaral, M. Ávila, F. Rösch, H. Amaral (Santiago, Chile)
- 174 Neural correlates of levodopa-responsive vs. levodopa-resistant freezing of gait in Parkinson's disease: A PET study**
A. Maillat, S. Thobois, V. Fraix, P. Derost, B.R. Bloem, P. Krack, S. Chabardès, P. Pollak, B. Debû (Grenoble, France)
- 175 White matter hyperintensities in Parkinson's disease: Do they explain the disparity between the postural instability gait difficulty and tremor dominant subtypes?**
T. Herman, K. Rosenberg-Katz, Y. Jacob, E. Auriel, T. Gurevich, N. Giladi, J.M. Hausdorff (Tel Aviv, Israel)
- 176 Disentangling the neurophysiological bases of balance and gait in humans**
M.U. Ferraye, B.R. Bloem, L. Heil, B. Debû, I. Toni (Nijmegen, Netherlands)
- 177 Effect of long-term treatment with pramipexole or levodopa on [123I]FP-CIT SPECT in a bi-nigral 6-OHDA mouse model**
C. Depboylu, L. Maurer, A. Matusch, V. Ries, M. Behe, W.H. Oertel, G.U. Höglinger (Marburg, Germany)
- 178 Midbrain atrophy is not a biomarker of progressive supranuclear palsy pathology**
J.L. Whitwell, J.E. Parisi, J.L. Gunter, S.D. Weigand, B.F. Boeve, J.E. Ahlskog, R.C. Petersen, D.W. Dickson, K.A. Josephs (Rochester, MN, USA)
- 179 Pattern of regional cortical thickness reduction and its relation to cognitive profile in nondemented Parkinson's disease patients**
M. Brys, M. Inglese, S. Varanese, R. Theodorescu, L. Glodzik, F. Ghilardi, A. DiRocco (New York, NY, USA)
- 180 Machine learning performs differential individual diagnosis of PD and PSP by brain MRI studies**
I. Castiglioni, A. Cerasa, C. Salvatore, F. Gallivanone, A. Augimeri, M. Lopez, M.C. Gilardi, A. Quattrone (Segrate, Italy)



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181 TBSS-based study of white matter asymmetry in cervical dystonia with botulinum toxin therapy

J.T. Boyd, R. Watts, C.G. Filippi (New York, NY, USA)

182 The effect of rasagiline on tissue injury in Parkinson's disease

O. Khan, S. Krstevska, E. George, V. Gorden, F. Bao, M. Shah, K. Thakore, C. Caon, C. Santiago, N. Shneyder (Detroit, MI, USA)

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183 High prevalence of gastroesophageal reflux disease in Parkinson's disease: A questionnaire-based study

T. Maeda, K. Nagata, Y. Satoh, T. Yamazaki, D. Takano (Akita, Japan)

184 The reliability of screening methods for dysphagia in patients with Parkinson's disease

T. Yamamoto, C. Oda, M. Satoh, K. Nakayama, M. Murata (Tokyo, Japan)

185 Cardiac sympathetic nerve and its positive inotropic activity may play an important role in the prevention of orthostatic hypotension in Parkinson's disease

T. Nakamura, M. Hirayama, H. Watanabe, G. Sobue (Nagoya City, Japan)

186 Cardiovascular autonomic failure in Parkinson's disease with dementia

A. Fanciulli, J.P. Ndayisaba, S. Duerr, R. Granata, W. Poewe, G.K. Wenning (Innsbruck, Austria)

187 Failure to manage constipation in Parkinson's disease. A review of medical services a patients perspective

J. Lawrence, T. Parmenter, T. McDonald (Sydney, Australia)

188 Pyridostigmine for treatment of orthostatic hypotension and nocturnal hypertension in patients with Parkinson's disease (PD): Ambulatory 24-hour blood pressure monitoring

N. Kawashima, E. Horiuchi, T. Yokoyama, K. Hasegawa (Fujisawa, Japan)

189 Preserved postganglionic sudomotor sympathetic nervous function in Parkinson's disease: A comparison to cardiac sympathetic nervous function

T. Yamamoto, A. Miyake, T. Kimura, Y. Nakazato, N. Tamura, N. Araki (Moroyama-machi, Japan)

190 Peripheral neuropathy and autonomic dysfunction in patients with Parkinson's disease and parkinsonism

F.d.A.A. Gondim, Í.S. Oliveira, D.F. Araújo, G.R. Oliveira, L.C. Alves, A.P. Melo, G.H. Nogueira, E.N. Andrade, W.H. Goes (Fortaleza, Brazil)

191 Identification of the subgroups of nonmotor symptoms in Parkinson's disease using cluster analysis

H.J. Yang, Y.E. Kim, J.Y. Yun, G. Eom, H. Park, H.J. Kim, B.S. Jeon (Seoul, Korea)

192 Orthostatic hypotension: Non-motor symptom or something else?

E. Palazon-Garcia, E. Fernandez-Diaz, A.B. Perona, S. Garcia-Muñozguren (Albacete, Spain)

193 Efficacy of midodrine in orthostatic hypotension related to extrapyramidal disorders. A retrospective audit

N.A. Mughal, B.I. Vieira (Nedlands, Australia)

194 Pathophysiology underlying drooling in Parkinson's disease: Bradykinesia of swallowing

M. Karakoc, G. Yalcin Cakmakli, N. Oztekin, F. Ak (Ankara, Turkey)

195 A cross-sectional survey on gastrointestinal dysfunctions in parkinsonism

T.J. Kim, J.Y. Lee, D.H. Kim, C. Shin, J.M. Kim (Seoul, Korea)

196 Subthalamic deep brain stimulation can improve gastric emptying in Parkinson's disease

T. Uchiyama, E. Arai, M. Arai, Y. Higuchi, T. Yamamoto, Y. Yamanaka, K. Aoyagi, O. Nagano, A. Shina, C. Yamaguchi, M. Fuse, T. Yamanishi, K. Hirata, O. Yokosuka, N. Saeki, S. Kuwabara (Tochigi, Japan)

197 Orthostatic autonomic dysfunction in idiopathic Parkinson's disease, multiple system atrophy and progressive supranuclear palsy

V. Miletic, M. Relja (Zagreb, Croatia)

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198 Neuronal oscillation patterns in the subthalamic nucleus and the ventrolateral thalamus in patients with Parkinson's disease

P. Zhuang, M. Hallett, L. He, S. Guo, Y. Zhang, J. Li, Y. Li (Beijing, China)

199 RR interval variation and the sympathetic skin response in the assessment of autonomic function in patients with Parkinson's disease

H. Ulvi, L. Özel, R. Demir, G. Özdemir, R. Aygül (Erzurum, Turkey)

200 Neurophysiologic study of pain in Parkinson's disease: A study with pain-related evoked potentials

M. Takeda, F. Okada, H. Tachibana, K. Kajiyama, H. Yoshikawa (Nishinomiya, Japan)

201 Characterization of firing patterns of striatal medium spiny neurons modulated by dopamine influx in parkinsonian monkeys

A. Singh, L.F. Potts, S.M. Papa (Atlanta, GA, USA)

202 Restoration of normal striatal dopamine responses with NMDA receptor antagonists in dyskinetic monkeys

A. Singh, L.F. Potts, K.J. Burke, S.M. Papa (Atlanta, GA, USA)

203 Dorsolateral subthalamic neuronal activities enhanced by median nerve stimulation facilitate Parkinson's disease during deep brain stimulation in general anaesthesia

S.T. Tsai, W.Y. Chuang, C.C. Kuo, S.Y. Chen (Hualien, Taiwan)

204 Usefulness of microrecording in subthalamic deep brain stimulation for Parkinson's disease

T. Mandat, M. Tutaj, H. Koziara, P. Nauman, W. Bonicki, R. Rola (Warszawa, Poland)

205 The subthalamic activity and striatal monoamine is modulated by subthalamic stimulation

T. Yamamoto, T. Uchiyama, R. Sakakibara, J. Taniguchi, S. Kuwabara (Chiba, Japan)

206 Diagnostic accuracy of morphological and functional retinal impairment in Parkinson's disease

E. Cubo, M.J. López-Peña, O. Pérez-Gil, E. Diez-Feijoo, P. Garcia-Gutierrez, N. Pérez-Mariscal, E. Araus-González, D. Armesto (Burgos, Spain)

207 The relationship of STN neuronal discharge to symptom type and severity in Parkinson's disease

J.A. Wilden, E.S. Ryapolova-Webb, N.B. Galifianakis, J.L. Ostrem, P.A. Starr (San Francisco, CA, USA)

208 Modulation of subthalamic discharges remedies locomotor deficits in a rat model of Parkinson's disease

C.H. Tai, Y.C. Yang, M.K. Pan, C.C. Kuo (Taipei, Taiwan)

209 Cerebellar cTBS induced-effects on STDT in Parkinson's disease

A. Conte, F. Di Biasio, M. Bologna, E. Iezzi, G. Fabbri, P. Li Voti, L. Rocchi, N. Modugno, A. Berardelli (Rome, Italy)



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- 210 Withdrawn by Author**
- 211 Transplantation of dopamine neurons in hemiparkinsonian rats: Neuronal firing activity and gene expression changes in the subthalamic nucleus**
M. Alam, R. Rumpel, A. Klein, M. Oezer, M. Wassermann, J.K. Krauss, K. Schwabe, A. Ratzke, C. Grothe (Hannover, Germany)
- 212 Electrophysiological characteristics of motor cortex pyramidal neurons in a rat model of levodopa-induced dyskinesia**
M. Tomiyama, T. Ueno, J. Yamada, H. Nishijima, Y. Funamizu, M. Baba, S. Ueno (Aomori, Japan)
- 213 Identifying EEG markers associated with anxiety in Parkinson's disease: Late positive potential**
N.N. Dissanayaka, T. Au, A. Angwin, D. Copland, J. O'Sullivan, G.J. Byrne, R. Marsh, G. Mellick, P.A. Silburn (Brisbane, Australia)
- 214 Oscillatory neuronal activity in the globus pallidus internus in parkinsonian patients and dystonia patients**
B. Cui, P. Zhuang, M. Hallett, Y. Zhang, J. Li, Y. Li (Beijing, China)
- 215 Cervical and ocular vestibular myogenic potentials in early Parkinson's disease**
M. Pötter-Nerger, S. Govender, G. Deuschl, J. Volkmann, J. Colebatch (Kiel, Germany)
- 216 Auditory startle reaction in Parkinson's disease patients with and without freezing of gait**
A. Gunduz, M.E. Kiziltan, G. Kiziltan, A. Tekeoglu, A. Sifoglu, B. Metin (Istanbul, Turkey)
- 217 Intrinsic rhythm of the primary motor cortex in Parkinson's disease**
R. Hanajima, Y. Shirota, S. Ohminami, R. Tsutsumi, T. Shimizu, N. Tanaka, Y. Terao, S. Tsuji, Y. Ugawa (Tokyo, Japan)
- 218 Postural instability in early Parkinson's disease: Evidence for early intervention with postural training**
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- 219 Reduced cortical connectivity between dorsal premotor cortex and ipsilateral primary motor cortex in older adults**
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- 220 The impairment of vagus nerve function leads to elemental changes in dopaminergic structures of rat brains**
A.T. Krygowska-Wajs, M. Szczerbowska-Boruchowska, A. Ziomber, P.J. Thor, T. Zalecki, M. Bukowczan, A.B. Gorecka (Cracow, Poland)
- 221 Visual cortex activating studies using magnetoencephalography gram in Parkinson's disease: Effect of aging and disease specificity**
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- 222 Somatosensory temporal discrimination in Parkinson's disease**
A. Karakus, A.B. Tokcaer (Ankara, Turkey)
- 223 Subthalamic nucleus stimulation in Parkinson's disease restores cortical plasticity**
K. Udupa, S.J. Kim, C. Gunraj, M. Hodaie, A.M. Lozano, A.E. Lang, R. Chen (Toronto, ON, Canada)
- 224 Cerebellar stimulation restores motor cortical plasticity in de novo Parkinson's disease**
T. Popa, F. Backer, S. Meunier, S. Pradeep, A. Balachandran, A. Kishore (Paris, France)
- 225 Differential therapeutical effects on medial and lateral vestibulospinal function in Parkinson's disease**
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- 226 Parkinson's disease-non invasive treatment with H-coil: A safe approach with a promising effect**
F. Spagnolo, M. Fichera, E. Houdayer, R. Chieffo, D. Dalla Libera, L. Straffi, E. Coppi, A. Nuara, L. Ferrari, G. Di Maggio, M. Bianco, S. Velikova, A. Zangen, G. Comi, M.A. Volonté, L. Leocani (Milan, Italy)
- 227 Difference in the modulation of quadripulse transcranial magnetic stimulation (QPS) effect between L-DOPA and zonisamide**
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- 228 Web-based databank for data management of patients with Parkinson's disease treated with deep brain stimulation**
M. Rosa, E. Rossi, S. Marceglia, G. Giannicola, E. Scelzo, A. Priori (Milano, Italy)
- 229 Is the human subthalamus the nucleus of risk taking? STN oscillations in parkinsonian patients with and without pathological gambling during economics risk decisions**
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- 230 The P3a wave, a reliable marker of progression in early and middle stages of Parkinson's disease**
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- 231 Withdrawn by Author**
- 232 Cortico-cortical connectivity in Parkinson's disease and the influence of dopaminergic treatment**
S. Zittel, C. Heinbokel, J. van der Vegt, E. Niessen, H. Siebner, C. Buhmann, C. Gerloff, T. Bäumer, A. Münchau (Hamburg, Germany)
- 233 Time course of subthalamic neuronal responses to contralateral subthalamic DBS**
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- 234 Apathy, depression and postural instability in Parkinson's disease: Related to a common pathophysiology?**
A. Hassan, S. Vallabhajosula, L.B. Zahodne, D. Bowers, M.S. Okun, H.H. Fernandez, C.J. Hass (Rochester, MN, USA)
- 235 An electrophysiological study of the human pedunculopontine nucleus during imaginary gait**
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- 236 Time-locked changes in single unit activity and local field potentials in the subthalamic nucleus during a grip force task in Parkinson's patients**
L.L. Imbach, C.R. Baumann, H. Baumann-Vogel, J. Hermsdörfer, O. Sürücü, J. Sarnthein (Zürich, Switzerland)
- 237 Patterns of cortical basal ganglia synchrony in Parkinson's disease**
S. Ahn, S.E. Zuber, R.M. Worth, L. Rubchinsky (Indianapolis, IN, USA)
- 238 Dopamine does not restore pre-movement excitability of the motor cortex in Parkinson's disease**
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- 239 Effects of deep brain stimulation at individualized frequencies on the motor signs of Parkinson's disease**
B. Neagu, T. Hoque, C. Hamani, M. Hodaie, A.M. Lozano, R. Chen (Toronto, ON, Canada)
- 240 Dorsal and ventral subthalamic nucleus stimulation improve the motor signs of Parkinson's disease**
M. Ushe, M.C. Campbell, T. Hershey, S.D. Tabbal, M. Karimi, J.M. Hartlein, J.S. Perlmutter (St. Louis, MO, USA)
- 241 Differences of silent periods (SPs) for the diagnosis of progressive supranuclear palsy (PSP), idiopathic normal pressure hydrocephalus (iNPH), and Parkinson's disease (PD) by using transcranial magnetic stimulation (TMS)**
T. Kawakami, K.I. Fujimoto, I. Nakano (Oyama, Japan)
- 242 The time course of changes in motor function with prolonged medication withdrawal - Effects of long duration response**
S.D. Kim, A. Ha, S. Kemp, N. Mahant, C.L. Lim, J. Griffith, F. Chang, S. Vucic, V.S.C. Fung (Sydney, Australia)
- Parkinson's disease: Quality of Life/Caregiver Burden**
- 243 Rimabotulinumtoxin B for the treatment of sialorrhea in Parkinson's disease**
M.V. Alvarez, P.M. Grogan, M. Alvarez (San Antonio, TX, USA)
- 244 Factors that contribute to postural instability in patients with idiopathic Parkinson's disease: A systematic review**
K. Diab, L.A. Hale, D.L. Waters, M.A. Skinner (Dunedin, New Zealand)
- 245 Withdrawn by Author**
- 246 Gender differences in anxiety and depression among the caregivers of patients with Parkinson's disease**
K.S. Anand, R. Verma, S. Mina (New Delhi, India)
- 247 Parkinson's disease: The experience of exercise**
C.J. O'Brien, C.G. Canning, L. Clemson (Bruce, Australia)
- 248 Use of visual and auditory cues in the freezing control in Parkinson's disease**
P. Marano, M.R. Seminara, M. Marano (Catania, Italy)
- 249 Gait improvement in 10 patients with Parkinson's disease by feedback from a new portable auditory device with smartphone applications**
W.O. Contreras Lopez, J.A. Espinoza Martinez, C.A. Escalante Higuera (Freiburg im Breisgau, Germany)
- 250 Osteoporosis and osteopenia in patients with Parkinson's disease in Malaysian population: A case control study**
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- 251 Move for change part I – A European survey evaluating the impact of the EPDA charter for people with Parkinson's disease on their disease management and quality of life**
K.J. Onarheim, L. Graham, S. Lindvall (London, United Kingdom)
- 252 Move for change part II – A European survey evaluating the impact of the EPDA charter for people with Parkinson's disease on their disease management and their quality of life**
K.J. Onarheim, L. Graham, S. Lindvall (London, United Kingdom)
- 253 Assessing the impact of self-reported disease severity and symptom burden on falls in members of an online Parkinson's disease community**
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- 254 Assessing the impact of self-reported disease stage and motor and non-motor symptom burden on health-related quality of life in Parkinson's disease**
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- 255 Wearable technology in freezing management of Parkinson's disease: Literature review**
S. Liew Hx (Singapore, Singapore)
- 256 Incidence, prevalence and clinical pathway of Parkinson's disease among Pakistani population**
T. Hussain, A. Amjad, F. Khan (Islamabad, Pakistan)
- 257 A new physical therapy approach for Parkinson's disease axial deformities: A pilot study**
V. Montemurro, M. Valente, R. Scatozza, E. Sinibaldi, G. Meco (Roma, Italy)
- 258 Development of health related quality of life instrument for Hindi speaking Parkinson's disease patients (indo-PDQOL) and initial psychometric testing**
R. Aggarwal, N. Kumar, V. Goyal, R.M. Pandey, G. Shukla, S. Singh, M. Behari (Delhi, India)
- 259 Integrated community care programme for Parkinson's disease patients in Singapore**
S. Karim, W. Li, K.Y. Tay, W.L. Au, L. Tan (Singapore, Singapore)
- 260 Perioperative risk profile in surgery of patients with Parkinson's disease**
S.K. Song, C.H. Kang, S.Y. Kang, J.S. Lee, J.H. Kang (Jeju-si, Jeju-do, Korea)
- 261 Musculoskeletal problems in Parkinson's disease: Neglected issues**
Y.E. Kim, W.W. Lee, H.J. Kim, B.S. Jeon (Seoul, Korea)
- 262 Does nutritional status affect quality of life in people with Parkinson's disease?**
J.M. Sheard, S. Ash, G.D. Mellick, P.A. Silburn, G.K. Kerr (Kelvin Grove, Australia)
- 263 Association between quality of life and caregiver burden in Mexican patients with Parkinson's disease**
A. Camacho-Ordoñez, A. Cervantes-Arriaga, M. Rodríguez-Violante, D. Martínez-Ramírez, H. Morales-Briceño, P. González-Latapi (Mexico City, Mexico)
- 264 Relationship between non-motor MDS-UPDRS items and quality of life in patients with Parkinson's disease**
M. Skorvanek, Z. Kosutzka, I. Nagyova, R. Ghorbani Saeedian, J. Rosenberger, P. Valkovic, Z. Gdovinova, J.P. van Dijk (Kosice, Slovakia (Slovak Republic))
- 265 Apathy in elderly non-demented patients with Parkinson's disease**
M. Skorvanek, I. Nagyova, R. Ghorbani Saeedian, J. Rosenberger, M. Krokavcova, J.W. Grootthoff, Z. Gdovinova, J.P. van Dijk (Kosice, Slovakia (Slovak Republic))
- 266 Advanced practice nurse service in a movement disorders outpatient clinic in Singapore**
W. Li, K.Y. Tay, W.L. Au, I. Seah, L. Tan (Singapore, Singapore)
- 267 To assess the severity of spectrum of non motor symptoms and quality of life of Parkinson's disease patients visiting tertiary centre in North India**
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- 268 Neurological nurse educator Shoalhaven project - Nursing in the community**
M.M. Pereira, S.J.G. Lewis, S.L. Naismith, M. Dixon (Nowra, Australia)
- 269 Argentine tango as a rehabilitation therapy for Parkinson's disease patients**
S.A. Rodríguez-Quiroga, T. Arakaki, S. Vanotti, E.V. Cores, Á. Merino, D. Rabinovich, J. Toibaro, N.S. Garretto (Caba, Argentina)
- 270 Sleep disturbances in Parkinson's disease and quality of life**
S. Telarovic, I. Telarovic (Zagreb, Croatia)
- 271 Continuous subcutaneous infusion of apomorphine in Parkinson's disease: Retrospective analysis of a series of 81 patients**
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- 272 Health related quality of life in Parkinson's disease**
Y. Osaki, Y. Morita (Nankoku, Japan)
- 273 What measures of disability predict caregiver strain in Parkinson's disease**
M. Kwasny, O. Oguh, E. Ziehm, T. Simuni (Jacksonville, IL, USA)
- 274 Impact of exercise on quality of life in Parkinson's disease**
O. Oguh, M. Kwasny, E. Ziehm, T. Simuni (Jacksonville, FL, USA)
- 275 Approach to treatment of depression in Parkinson's disease: Results from NPF-QII**
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- 276 Clinical and medical care change at 6 months of L-Dopa induced dyskinesia in Parkinson's disease patients in France – Results of the LIDIA study (Levodopa Induced Dyskinesia Impact eVAluation)**
C. Brefel-Courbon, F. Durif, P. Krystkowiak, F. Ory-Magne, F. Tison, F. Viallet, L.E. Willemin, I. Bourdeix, K. Rerat (Rueil-Malmaison, France)
- 277 Comparison of patient and caregiver assessments of patient disability in Parkinson's disease**
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- 278 A snapshot of care delivery and access for Parkinson's disease: Burden and impact on health and lifestyle**
K.A. Kovacs Burns, P.M. Jensen (Edmonton, AB, Canada)
- 279 The relationship between vitamin D concentrations and mood in Parkinson's disease**
A. Peterson, B. Lobb, J. Mack, J. Quinn (Portland, OR, USA)
- 280 Tai Chi training to reduce falls in patients with Parkinson's disease - A cost-effectiveness analysis**
F. Li, P. Harmer (Eugene, USA)
- 281 Impact of change in caregiver on longitudinal outcomes in individuals with PD in NPF-QII**
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- 282 The impact of non-motor symptoms on quality of life in PD and dopamine dysregulation syndrome**
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- 283 Efficacy and tolerability of rasagiline in daily clinical use – A post marketing observational study in patients with Parkinson's disease focusing on nonmotor symptoms and QoL data**
H. Reichmann, R. Apfel, S. Schroeder (Dresden, Germany)
- 284 An exploration of relationships among emotional decoding ability, motor symptoms and non-motor features in non-demented Parkinson's disease**
R.L. Yu, R.M. Wu (Taipei, Taiwan)
- 285 Promoting Parkinson's specific physiotherapy practice: Association of Physiotherapists in Parkinson's Disease Europe (APPDE)**
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- 287 The development and implementation of performance measures based on the American Academy of Neurology (AAN) Parkinson's disease (PD) guidelines to assess provider implementation and adherence of evidenced based recommendations according to the Joint Commission (TJC) disease specific certification (DSC) protocol**
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- 288 Evaluation of a rhythmic exercise program for patients with Parkinson's disease**
A. Myskja (Oslo, Norway)
- 289 Clinical outcomes in patients with Parkinson's disease treated with an MAO-B inhibitor**
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- 291 Fatigue in Parkinson's disease – Prevalence and clinical determinants**
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- 292 Functional and clinical measures correlating with driving ability in individuals with Parkinson's disease**
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- 294 Prevalence of gastroparesis symptoms in patients with early Parkinson's disease**
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- 295 Test-retest reliability of a Parkinson's disease monitoring system**
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- 296 Criterion validity and reliability of Beck depression inventory and 30-item geriatric depression scale in Parkinson's disease**
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- 297 A quick and sensitive screening tool for micrographia in Parkinson's disease**
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- 298 The relationship between depression and voice disorder in patients with Parkinson's disease**
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- 299 Non motor symptoms in PD patients with SWEDDs**
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- 300 Differential effects of age and gender on timed up and go (TUG) and 10-metre walking test (10MWT) in an Asian population**
B. David Prakash, S. Liew, C. Chung, L.C.S. Tan, W.L. Au (Singapore, Singapore)
- 301 Validation of the questionnaire for impulsive-compulsive disorders (QUIP)-Japanese version in Parkinson's disease**
Y. Furusawa, Y. Shimizu, Y. Kawabata, K. Kobayashi, T. Noda, T. Yamamoto, M. Murata (Kodaira, Japan)
- 302 A computer vision framework for finger-tapping evaluation in Parkinson's disease**
T. Khan, D. Nyholm, J. Westin, M. Dougherty (Falun, Sweden)
- 303 A web-based system for visualizing upper limb motor performance of Parkinson's disease patients**
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- 304 Predictors of changes in balance over 6 and 12 months in Parkinson's disease: An exploratory analysis**
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- 305 Validation of Hindi version of NMSS in Indian population**
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- 306 Clinical evaluation of fatigue in Japanese patients with Parkinson's disease**
K. Tanaka, K. Wada, S. Nakashita, M. Yamamoto, K. Nakashima (Yonago, Japan)
- 307 Prospective measurement of balance decline in people with Parkinson's disease: An exploratory analysis**
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- 308 Psychometric properties of the brief Penn daily activities questionnaire (PDAQ) for Parkinson's disease**
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- 309 Bradykinesia-akinesia incoordination test: Validating an online keyboard test of upper limb function**
A. Nagy, S. Acharya, S. Hadavi, J.P. Bestwick, J. Fearnley, A.J. Lees, G. Giovannoni, A.J. Noyce (London, United Kingdom)
- 310 The utilization of a one-leg balance task for assessing balance and disease bilaterality in people with Parkinson's disease**
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- 311 The validity and repeatability of kinematic motor testing according to the 'posturo-locomotion-manual test'**
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- 312 Non motor manifestations in a cohort of patients with Parkinson's disease from a developing country in Asia**
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- 313 A new, quantitative scale for evaluating L-dopa-induced dyskinesia in non-human primates**
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- 314 No PD dyskinesia scale protects against placebo responses: A comparison of seven scales**
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- 315 Gender-related differences of non-motor symptoms of patients with Parkinson's disease- A study from Southwest China**
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- 316 Quantification of speed, amplitude and fatigue in PD**
L. Verhagen, L. van Imhoff, S. van den Munckhof, S. Gardon, B. Ouyang (Chicago, IL, USA)
- 317 Withdrawn by Author**
- 318 Correlating Parkinson's disease motor symptoms with 3-dimensional [18F]FP-CIT PET**
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- 319 Self-report benefits of Tai Chi training by patients with Parkinson's disease**
P. Harmer, F. Li (Salem, OR, USA)
- 320 The instrumented timed up and go test: Potential for assessing alteration in Parkinson's disease clinical subtypes**
T. Herman, A. Weiss, N. Giladi, J.M. Hausdorff (Tel Aviv, Israel)
- 321 BradykAn: A new reliable tool for measuring bradykinesia**
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- 322 Video-motion detection for objectively quantifying movements in patients with Parkinson's disease**
J. Wu, C. Lai, R. Gupta, A. Abosch, D. Nelson (Minneapolis, MN, USA)
- 323 MDS-UPDRS dopamine dysregulation syndrome scores correlate with lowa gambling test performance**
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- 325 Fatigue in Parkinson's disease: Prevalence and associated factors**
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- 326 Comparison of different symptom assessment scales for multiple system atrophy**
M. Matsushima, I. Yabe, K. Sakushima, K. Oba, Y. Mito, A. Takei, H. Houzen, K. Tsuzaka, K. Yoshida, Y. Maruo, H. Sasaki (Sapporo, Japan)
- 327 Differential effects of age and gender on hand motion tasks in an Asian population**
B. David Prakash, I.S.H. Seah, L.C.S. Tan, W.L. Au (Singapore, Singapore)
- 328 Semi-automatic scoring method for torticollis by using kinect**
T. Nakamura, M. Sato, H. Kajimoto (Chofu, Japan)
- 329 Are falls and balance confidence related to driving restrictions in older adults with Parkinson's disease?**
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- 330 The adult form of Niemann-Pick type C with the biochemical variant mutation on treatment with miglustat**
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- 332 Cognitive and psychological interventions for depression in Parkinson's disease: Chinese experiences**
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- 333 Acoustic analysis of voice in Parkinson's disease and amyotrophic lateral sclerosis**
A.K. Silbergleit, P.A. LeWitt, G. Gardner, E. Peterson (West Bloomfield, USA)
- 334 Intestinal obstruction in patients with Parkinson's disease**
T. Mishima, T. Obata, M.A. Higuchi, J. Tsugawa, S. Ouma, N. Noda, H. Shiwaku, N. Matsuoka, S. Nimura, Y. Tsuboi (Fukuoka, Japan)
- 335 Clinical correlates of anhedonia in patients with Parkinson's disease**
H. Tachibana, T. Yamanishi, K. Matsui, M. Oguru, S. Matsutani, K. Matsubara, M. Hashimoto, T. Oku, K. Kawabata, K. Toda, B. Okuda, N. Oka (Nishinomiya, Japan)
- 336 Risk of impulse control disorders in patients with lateralized Parkinson's disease**
S. Ozkan, C. Susuz, O. Ozdemir, O. Demet (Eskisehir, Turkey)
- 337 JM-010, a new promising safe treatment paradigm for L-DOPA induced dyskinesia**
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- 338 A novel α -synuclein-GFP mouse model displays progressive motor impairment, olfactory dysfunction and accumulation of α -synuclein-GFP**
C. Hansen, T. Björklund, G.H. Petit, M. Lundblad, R.P. Murmu, P. Brundin, J.Y. Li (Lund, Sweden)
- 339 Rhythm-related gait measures rather than gait variability measures as indicators of early gait disorder in Parkinson's disease (PD)**
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- 340 Depersonalization-derealization associated with subthalamic nucleus deep brain stimulation: A case report**
A. Chopra, J. Daniels, B. Klassen (Rochester, USA)
- 341 Postural instability and history of falls in Parkinson's disease: Correlation with the pull test score**
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- 342 Automatic grouping of acceptable or unacceptable vocalizations in people with Parkinson's disease**
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- 343 Improved communication with a modified pacing board**
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- 344 An unusual case of impulse control disorder (ICD) in a Parkinson's disease (PD) patient following autologous hemopoietic stem cell transplant**
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- 345 I finally see what you see: A window into Parkinson's disease hallucinations**
G.T. Stebbins, C.G. Goetz, J.G. Goldman, C.L. Vaughan (Chicago, IL, USA)
- 346 Impulse control disorder, dopamine agonist withdrawal syndrome and punding in parkin mutation positive Parkinson's: Report of the first case**
A. Todorova, K. Ray Chaudhuri (London, United Kingdom)
- 347 Prevalence of impulse control disorders in Danish patients with Parkinson's disease**
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- 348 Psych-Q PD: Psychosis and hallucinations questionnaire in Parkinson's disease**
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- 349 Neuropsychiatric disorders in Parkinson's disease: A study from Eastern India**
A. Dutt, H. Kumar, C. Sengupta, M. Mukherjee, P. Paul (Kolkata, India)
- 350 Low frequency of impulse control disorder in Mexican patients with Parkinson's disease**
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- 351 Impulsive control disorders in Parkinson's disease**
A. Nikitina, N. Fedorova (Moscow, Russia)
- 352 Long-term prognosis of swallowing difficulty observed in Parkinson's disease and related disorders**
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- 353 Depression in Parkinson's disease in Slovak population**
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- 354 Gray matter neuroimaging signatures of Parkinson's disease hallucinations**
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- 355 Decisions under risk in Parkinson's disease: Evaluating probability and magnitude for gain and loss**
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- 356 Rasagiline and apathy in patients with Parkinson's disease**
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- 357 Dopamine agonists rather than deep brain stimulation cause reflection impulsivity in Parkinson's disease**
A. Djamshidian, S.S. O'Sullivan, T. Foltynie, I. Aviles-Olmos, P. Limousin, A. Noyce, L. Zrinzo, A.J. Lees, B.B. Averbeck (London, United Kingdom)
- 358 Whole body kinematic and muscle activity underlying quadrupedal locomotion of normal and parkinsonian non-human primates**
E. Bezard, Y. Lang, I. Vollenweider, C. Gross, T. Boraud, Q. Li, G. Courtine (Bordeaux, France)



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- 359 Modulation of attentional network coherence during manipulation of cognitive load in patients with Parkinson's disease and freezing of gait**
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- 360 Sedentary behavior increases over 18 months in early Parkinson's disease**
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- 361 Gait is associated with decline in attention at 18 months in an incident cohort of Parkinson's disease**
S. Lord, B. Galna, A. Yarnall, G. Duncan, T. Khoo, D. Burn, L. Rochester (Newcastle upon Tyne, United Kingdom)
- 362 Gait dysfunction, impaired postural control and falls in incident Parkinson's disease**
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- 363 Perception of distance in PD freezers and non-freezers: A relationship to a mismatch between imagined and executed movement**
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- 364 Clinical and epidemiological features of the impulsive-compulsive behaviors of patients with Parkinson's disease in the Tomsk region**
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- 365 Dopaminergic neural changes and impulse control related behavior disorder in Parkinson's disease**
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- 366 Assessment of impulse control disorders in Parkinson's patients with infusion therapies: A single center experience**
A. Todorova, A. Martin, D. Okai, M. Samuel, R. Brown, A. David, K. Ray Chaudhuri (London, United Kingdom)
- 367 Prevalence of depression and anxiety in Parkinson's disease patients who underwent subthalamic nucleus deep brain stimulation (STN-DBS)**
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- 369 A prospective observational study of dopamine agonist withdrawal syndrome in Parkinson's clinic: The EuroDaws study**
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- 370 Pain, anxiety and depression correlates in community dwelling Filipino Parkinson's disease patients**
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- 371 Depression structure and Raphe echogenicity on transcranial parenchymal sonography in patients with Parkinson's disease**
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- 372 Dopamine dysregulation syndrome in Parkinson's disease patients on duodenal levodopa infusion**
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- 373 Neuropsychiatric morbidity in Parkinson's disease**
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- 374 The frequency of impulse control disorders in Parkinson's disease patients**
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- 375 Psychiatric comorbidities among hospitalized Parkinson's disease patients**
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- 376 Investigation of decision making and impulse control disorder in Parkinson's disease**
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- 377 Increased tremor contributes to postural instability and prospective falls in people with Parkinson's disease**
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- 378 The impact of intensive physical therapy (LSVT BIG) in young onset, de novo Parkinson's disease: A case study**
T. Hefferon, C.M. Fox, L.O. Ramig, H. Mishko (Denver, CO, USA)
- 379 A controlled study of risk factors and characteristics of addiction-like behaviors in Thai Parkinson's disease patients: Analysis of 120 cases**
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- 380 The effects of the Lee Silverman voice treatment (LSVT) on observers' perceptions of individuals with Parkinson's disease (PD)**
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- 381 Exploring non motor fluctuations in Parkinson's disease: A study using profile of mood states scale**
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- 382 Long-term cognitive follow-up of impulse control disorders in Parkinson's disease: A prospective longitudinal controlled study**
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- 383 The development of levodopa-induced dyskinesias in Parkinson's disease is dependent on age-of-onset of the disease, and cannot be predicted by serotonin or dopamine transporter availability**
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- 384 Efficacy of piribedil in apathy following STN stimulation in Parkinson's disease**
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- 385 An exercise intervention to prevent falls in Parkinson's disease: An economic evaluation**
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- 386 Deferred action of low doses of radiation on neurodegeneration in Parkinson's disease (PD)**
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- 387 A randomized, double blind, placebo-controlled study to assess the effect of rasagiline on mild cognitive impairment in patients with Parkinson's disease: The MODERATO study**
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- 388 Akathisia in Parkinson's disease: Frequency and clinical implications**
Ö. Aykaç, C.M. Akbostanci, N.F. Mercan, O. Karan (Ankara, Turkey)
- 389 Efficacy of rasagiline 1mg/day on key motor symptoms of early Parkinson's disease: Post-hoc analysis from the Attenuation of Disease progression with Azilect® Given Once-daily (ADAGIO) study**
E. Tolosa (Barcelona, Spain)
- 390 Effectiveness of resistance training on muscle strength and physical function in people with Parkinson's disease: A systematic review and meta-analysis**
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- 391 Concomitant medications in the Parkinson Progression Marker Initiative**
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- 392 Effects of rasagiline on olfactory function in patients with Parkinson's disease**
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- 394 A long-term study for efficacy and safety of istradefylline in Parkinson's disease subjects with wearing-off phenomenon**
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- 395 Zonisamide improves wearing-off in Parkinson's disease: A nation-wide randomized, double-blind study**
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- 396 Is there a correlation between plasma homocysteine and Parkinson's disease associated with polyneuropathy?**
K.S. Lee, I.U. Song, J.W. Park, I.S. Park (Seoul, Korea)
- 397 Facial expression in Parkinson's disease: A double-blind, randomized rehabilitation trial**
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- 398 Evaluation of serum cortisol and dehydroepiandrosterone sulphate levels in Parkinson's disease patients with postural instability**
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- 399 Efficacy of levodopa-carbidopa intestinal gel compared to oral levodopa-carbidopa in advanced Parkinson's disease: Sensitivity and responder analyses**
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- 400 Efficacy of levodopa-carbidopa intestinal gel in patients with advanced Parkinson's disease: Subgroup analyses**
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- 401 Changes in "On" time with levodopa-carbidopa intestinal gel infusion in advanced Parkinson's disease patients with troublesome dyskinesia**
A. Antonini, V.S.C. Fung, J.T. Boyd, J.T. Slevin, C. Hall, K.L. Widnell, K. Chatamra, J. Benesh (Venice, Italy)
- 402 Gastrointestinal safety of the levodopa-carbidopa intestinal gel delivery system in treating advanced Parkinson's patients**
M. Epstein, D. Johnson, R. Hawes, N. Schmulewitz, A. Vanagunas, K.L. Widnell, S. Eaton, K. Chatamra, W.Z. Robieson, J. Benesh (Annapolis, MD, USA)
- 403 Incidence of peripheral neuropathy in advanced Parkinson's subjects treated with levodopa-carbidopa intestinal gel**
R. Freeman, D. Cornblath, P. Anand, T. Muller, F. Klostermann, P. Odin, K. Chatamra, W.Z. Robieson, K.L. Widnell, J. Benesh (Boston, MA, USA)
- 404 Malignant melanoma in early treated Parkinson's disease: The NET-PD trial**
R. Constantinescu, E.F. Augustine, P. Auinger, S. Sharma, L. Khadim, K. Kiebertz (Rochester, NY, USA)
- 405 Randomized, double-blind, placebo-controlled trial of vitamin D supplement to prevent deterioration in Parkinson's disease**
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- 406 Effects of transcranial direct current stimulation on dual-task gait performance in patients with Parkinson's disease**
M.K.Y. Mak, L. Yu (Hong Kong, Hong Kong)
- 407 Effect of levodopa on depression in de novo patients with Parkinson's disease**
K. Kashihara, T. Imamura, M. Ohno (Okayama, Japan)
- 408 Diagnostic value of certain levels of microelements in the oral fluid of patients with Parkinson's disease**
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- 409 Novel levodopa product ODM-101 vs levodopa/carbidopa/entacapone in Parkinson's disease with response fluctuations**
T. Müller, M. Kuoppamäki, M. Vahteristo, V. Aho, J. Ellmén, C. Trenkwalder (Berlin, Germany)
- 410 The effects of weight on adverse event reporting in Parkinson's disease patients treated with IPX066 extended-release carbidopa-levodopa capsules**
S. Kell, M. O'Connell, A. Hsu, D. Silver, L. Elmer, S. Gupta (Hayward, CA, USA)
- 411 The effect of levodopa on posture in patients with Parkinson's disease**
F. Benninger, A. Khlebtovsky, E. Melamed, R. Djaldetti (Petah Tiqva, Israel)
- 412 Bowen therapy, a non-pharmacologic treatment for Parkinson's disease**
J. Rasco, K. Lee (Dunedin, New Zealand)
- 413 The ratio of STN/SN neuronal activity, a quantitative bio-marker for Parkinson's disease progression**
C.C. Kao, Z. Niu, M. Remple, C. Camalier, J. Neimat, D. Charles, P.E. Konrad (Nashville, TN, USA)



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- 415 The effects of duration of exposure on adverse event reporting in Parkinson's disease patients treated with IPX066 extended-release carbidopa-levodopa capsules**
S. Kell, A. Hsu, M. O'Connell, T. Simuni, S. Gupta (Hayward, CA, USA)
- 416 Dose conversion to IPX066 in advanced Parkinson's disease patients treated with carbidopa-levodopa-entacapone**
A. Hsu, S. Khanna, S. Kell, A. Espay, R. Gil, C. Singer, S. Gupta (Hayward, CA, USA)
- 417 A rhythmical auditory cueing exercise programme to reduce falls and freezing of gait in PD: The Cued Up! Exercise programme**
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- 418 Randomized treatment trial of rifampicin in MSA patients**
P. Low, D. Robertson, S. Gilman, H. Kaufmann, W. Singer, I. Biaggioni, R. Freeman, S. Perlman, R. Hauser, W. Cheshire, S. Lessig, S. Vernino, J. Mandrekar, W. Dupont, T. Chelimsky, W. Galpern (Rochester, MN, USA)
- 419 Conventional physical therapy versus physical conditioning in patients with Parkinson's disease**
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- 420 Progression of Parkinson's disease and side of onset of motor symptoms**
Y.O. Trufanov, Y.I. Golovchenko (Lugansk, Ukraine)
- 421 Analysing progressive micrographia in PD as a "motor sequence effect"**
A. Seidl, S. Skodda, A. Hoffmann, P.H. Kraus (Bochum, Germany)
- 422 Saffinamide is associated with clinically important improvement in motor symptoms in fluctuating PD patients as add-on to levodopa (SETTLE)**
R. Anand, A.H.V. Schapira, R. Giuliani, V. Lucini (St. Moritz, Switzerland)
- 423 Comparison of once-daily versus twice-daily combination of pramipexole extended release in Parkinson's disease**
J.Y. Yun, H.J. Kim, Y.E. Kim, B.S. Jeon (Seoul, Korea)
- 424 Saffinamide significantly improves responder rates in fluctuating Parkinson's disease (PD) patients as add-on to levodopa (SETTLE)**
A.H.V. Schapira, S.H. Fox, R.A. Hauser, J. Jankovic, W. Jost, J. Kulisevsky, R. Pahwa, W. Poewe, V. Lucini, R. Anand (London, United Kingdom)
- 425 Olfaction dysfunction in Parkinson's disease (PD) and multiple system atrophy (MSA)**
M. Behari, J. Mathew, A.K. Pandit, A. Pathak, G. Kumar, D. Vibha, A. Srivastav, G. Shukla, V. Goyal (New Delhi, India)
- 426 Usefulness of rapid switch from ergot dopamine agonists to pramipexole extended-release preparation in patients with Parkinson's disease**
H. Saiki, S. Matsumoto (Osaka, Japan)
- 427 Complementary and alternative medicine (CAM) in Indian Parkinson's disease (PD) patients**
A.K. Pandit, G. Kumar, D. Vibha, A. Srivastava, G. Shukla, V. Goyal, M. Behari (Delhi, India)
- 428 Olfactory dysfunction in sporadic Parkinson's disease and LRRK2 PD**
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- 429 Improving diagnostic accuracy in early Parkinson's disease**
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- 430 Safety, tolerability and levodopa pharmacokinetics following inhaled administration of CVT-301, a levodopa dry powder aerosol, in healthy, adult subjects**
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- 431 Effect of opicapone multiple-dose regimens on levodopa pharmacokinetics, motor response, and erythrocyte-COMT activity in Parkinson's patients co-administered with levodopa/dopa-decarboxylase inhibitor**
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- 432 Effect of opicapone and entacapone on levodopa pharmacokinetics when administered with immediate release 100/25 mg levodopa/carbidopa in healthy subjects**
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- 433 Falls in Australians living with Parkinson's disease: When, where and how?**
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- 434 What are the best methods to prevent falls in Parkinson's disease?**
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- 435 Using telerehabilitation to deliver speech treatment to people with Parkinson's disease in the home**
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- 436 Differentiating Parkinson's disease from multiple system atrophy by [123I] meta-iodobenzylguanidine myocardial scintigraphy and olfactory test**
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- 437 Evaluation of movement strategy training in Parkinson's disease**
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- 438 Study design of a double-blind, randomized, controlled trial (RCT) evaluating the effects of short pulsewidth in deep brain stimulation (DBS) of the subthalamic nucleus for Parkinson's disease (CUSTOM-DBS)**
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- 439 Segmentation of sporadic and genetic Parkinson's disease using low intervariability blood biomarker analysis**
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- 440 Predictors of adherence to an exercise program in people with Parkinson's disease**
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- 441 Stroke risk with arterial stiffness in idiopathic Parkinson's disease**
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- 442 Exercise for falls prevention in Parkinson's disease: A randomised controlled trial**
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- 443 Randomized trial of extended release amantadine in Parkinson's disease patients with levodopa-induced dyskinesia (EASED study)**
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- 444 A phase 2, placebo-controlled, randomized, double-blind trial of tozadenant (SYN-115) in patients with Parkinson's disease with wearing-off fluctuations on levodopa**
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- 445 Body weight support and treadmill for young and elderly subjects**
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- 446 A placebo controlled, randomized, double-blind study to assess the safety and clinical benefit of rasagiline as an add-on to dopamine agonist monotherapy in early Parkinson's disease (PD): The ANDANTE study**
R.A. Hauser, D. Silver, A. Choudhry, S. Isaacson (Tampa, FL, USA)
- 447 Risks of falls in Parkinson's disease**
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- 448 Medical marijuana (cannabis) treatment for motor and non-motor symptoms in Parkinson's disease. An open-label observational study**
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- 449 Leg muscle power training in Parkinson's disease: A randomised controlled trial**
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- 450 The heterogeneity of excessive daytime sleepiness in Parkinson's disease**
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- 451 Handedness and the rate of Parkinson's disease progression**
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- 452 Constant therapeutic levodopa (LD) plasma concentrations maintained by continuous subcutaneous (SC) administration of ND-0612, a novel formulation of LD/carbidopa (CD)**
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- 453 Single and multiple dose pharmacokinetics of a modified-release (MR) formulation of the mGluR5 antagonist mavoglurant (AFQ056) in healthy Japanese subjects**
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- 454 Prediction of instability in people with Parkinson's disease - Clinical balance and gait tests**
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- 455 Future falls and/or near falls in people with Parkinson's disease - The sensitivity and specificity of two retropulsion tests**
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- 456 Quantitative assessment of tongue pressure during swallowing in Parkinson's disease (PD)**
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- 457 The effect of plasma concentration of pepsinogens for the pharmacokinetics of levodopa**
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- 458 Validation of a novel GaitReminder™ Apple iPod application to measure real-time stride data and control music play in a gait rehabilitation program for people with Parkinson's disease**
A.L. Cihal, C. Terry, L. Kallie, M. Nicole, H. Bin, Enrolment Services University of Calgary (Calgary, AB, Canada)
- 459 Diagnostic value of saliva biomarkers in PD?**
G. Wunsch, A. Weishaupt, J. Volkmann, F. Steigerwald (Würzburg, Germany)
- 460 The effects of galvanic vestibular stimulation on camptocormia in Parkinson's disease: A case report**
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- 461 Rasagiline for the symptomatic treatment of fatigue in Parkinson's disease: A 3-center, placebo-controlled, pilot study (the REST trial)**
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- 462 Effects of a community-based balance program on enhancing the balance performance in people with Parkinson's disease**
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- 463 The effects of age and Parkinson's disease on performance and learning of an environmentally valid implicit motor sequence task**
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- 464 The Parkinson Progression Marker Initiative (PPMI) – Baseline PD, healthy, and SWEDD data**
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- 465 Plasma apolipoprotein A1 (APOA1) as a biomarker for Parkinson's disease**
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- 466 Carbidopa, entacapone and levodopa use in France in 2012 – START (STALEVO®: Response to titration) survey initial phase results**
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- 467 Comparison of different sites of injections of incobotulinumtoxin (XEOMIN®) into the major salivary glands in drooling**
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- 468 Impact of droxidopa treatment in patients with Parkinson's disease and symptomatic neurogenic orthostatic hypotension (study 306)**
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- 469 Long-term study of intraduodenal levodopa (Duodopa®) in patients with advanced Parkinson's disease**
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- 470 Different treatment strategies using apomorphine pump therapy in parkinsonian patients and their influence on quality of life. 6 months observational study**
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- 471 Self-reported symptoms and motor tests via telemetry in a 36-month levodopa-carbidopa intestinal gel infusion trial**
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- 472 Real-time fMRI neurofeedback for the treatment of Parkinson's disease (PD)**
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- 473 Proposal of a new approach for postural deformities in Parkinson's disease with one innovative proprioceptive orthosis (PD Elasticare)**
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- 474 A phase I study of intranasal glutathione in Parkinson's disease**
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- 475 A randomized controlled feasibility trial to determine the effectiveness of Irish set dancing for people with Parkinson's disease**
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- 476 Minimal clinically important changes in UPDRS scores in early PD in rotigotine clinical trials**
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- 477 Antipsychotic efficacy and motor tolerability in a phase III placebo-controlled study of pimavanserin in patients with Parkinson's disease psychosis (ACP-103-020)**
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- 478 Methods for imputing missing data for Parkinson's disease clinical trials with multiple correlated outcomes**
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- 479 The lessebo effect in Parkinson's disease**
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- 480 Possible effects of non-immersive virtual reality in upper extremities in a patient with Parkinson's disease: A single case report**
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- 481 Impact of droxidopa treatment on falls and fall related injuries in patients with Parkinson's disease and symptomatic neurogenic orthostatic hypotension (study 306)**
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- 482 Parkinson's disease lesion effect and melanoma treatment response with ipilimumab and whole brain radiation**
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- 483 Hypomethylation of SNCA in blood of patients with sporadic Parkinson's disease**
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- 484 The addition of a concurrent task changes postural reactions in individuals with Parkinson's disease**
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- 485 Feasibility and efficacy of a 16-week SpeedFlex exercise therapy program in patients with Parkinson's disease**
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- 486 VANTAGE trial: A prospective, multi-center trial evaluating deep brain stimulation with a new multiple-source, constant-current rechargeable system (Vercise™) in Parkinson's disease**
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- 487 Safety and efficacy of recombinant human platelet derived growth factor BB (rhPDGF-BB) in Parkinson's disease**
G. Paul-Visse, O. Zachrisson, A. Varrone, P. Almqvist, M. Jerling, G. Lind, S. Rehnrona, B. Linderoth, H. Bjartmarz, M. Svensson, K. Jansson Mercer, A. Forsberg, L.L. Shafer, A.M. Janson Lang, C. Halldin, P. Svenningsson, H. Widner, J. Frisén, S. Pålhagen, A. Haegerstrand (Stockholm, Sweden)
- 488 Treatment of axial dystonia in Parkinson's disease by botulinum toxin**
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- 489 Role of levodopa in progression of Parkinson's disease**
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- 490 Towards the automated detection of near falls during community ambulation in patients with Parkinson's disease**
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- 491 Quantitative motor (Q-Motor) deficits in tapping (digitomotography) distinguish Parkinson's disease from control subjects and correlate to the UPDRS III - A step towards objective outcomes for motor deficits in clinical trials?**
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- 492 Assessment of the clinical progression of Parkinson's disease**
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- 493 An open-label study on switching therapy from pramipexole or ropinirole to rotigotine transdermal system in subjects with advanced-stage, idiopathic Parkinson's disease**
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- 494 A phase II, double blind, randomized placebo-controlled 4-way crossover study to evaluate the relative efficacy and safety of OC oral solution (oxybutynin and clonidine) for sialorrhea in patients with Parkinson's disease**
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- 495 Relationship between serum urate and clinical features in early Parkinson's disease: PPMI baseline data**
R. Constantinescu, D. Jennings, E.D. Foster, C.S. Coffey, K. Marek, Parkinson's Progression Marker Initiative (Rochester, NY, USA)
- 496 Safety and efficacy of exercise on symptoms, quality of life, drug interactions, fall frequency and prognosis of Parkinson's disease: A systematic review of the literature**
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- 498 Long term pimavanserin treatment for Parkinson's disease psychosis (PDP) - An interim analysis of safety and tolerability**
R. Mills, H. Williams, D. Bahr, K. Chi-Burris, C. Ballard (San Diego, CA, USA)
- 499 Sustained-release carbidopa-levodopa (accordian pill) in patients with advanced Parkinson's disease: Pharmacokinetic and clinical experience**
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- 500 Use of the pill questionnaire to detect cognitive deficits and assess their impact on daily life in patients with Parkinson's disease**
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- 501 Meta analysis: Donepezil in the treatment of cognitive impairment dementia in patients with Parkinson's disease**
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- 502 Relationships between cognitive status, speech characteristics and communicative participation in Parkinson's disease**
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- 503 Relationships between cognitive status and speech, language and communication impairments in Parkinson's disease: A systematic review**
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- 504 STN DBS, not L-DOPA, restores the contextual regulation of simple decisions**
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- 505 Characterising mild cognitive impairment in incident Parkinson's disease: The ICICLE-PD study**
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- 506 Is freezing of gait related to a specific attentional disorder in Parkinson's disease?**
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- 507 Motor and non-motor endophenotypes associated with cerebrospinal α and amyloid- β in Parkinson's disease**
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- 508 The relationship between small vessel disease (SVD), vascular risk factors (VRFs) and motor and cognitive impairment in Parkinson's disease (PD): A clinicopathological study**
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- 509 A new paradigm in neuropsychological assessment: Motor imagery. A pilot study with Parkinson's disease patients**
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- 510 Clinical value of brain perfusion SPECT between idiopathic Parkinson's disease and Parkinson variant of multiple system atrophy**
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- 511 Effect of COMT-inhibitor on Parkinson's disease associated with dementia**
J.W. Park, K.S. Lee, I.U. Song, J.S. Kim, Y.D. Kim (Seoul, Korea)
- 512 The neuropsychological domain differences between Parkinson's disease patients with and without mild cognitive impairments; a longitudinal investigation**
P. Hobson, J. Meara (Rhyl, United Kingdom)
- 513 Is mild cognitive impairment in Parkinson's disease predictive for further cognitive decline after deep brain stimulation?**
G.J. Geurtsen, B.A. Schmand, R.M.A. de Bie, V.J.J. Odekerken, R.P. Schuurman (Amsterdam, Netherlands)
- 514 Freezing of gait in Parkinson's disease is related to impaired set-shifting during stepping**
K. Smulders, R.A. Esselink, B.R. Bloem, R. Cools (Nijmegen, Netherlands)
- 515 Frontal hypoperfusion in aged, non-demented patients with Parkinson's disease**
J.W. Kim, Y.J. Jeong, S.M. Cheon (Busan, Korea)
- 516 Cognitive impairment after deep brain stimulation: A follow-up study and influence of age**
E. Herrera, S. González, R. Merino, R. Ribacoba, E. Suárez, F. Cuetos (Oviedo, Spain)
- 517 Withdrawn by Author**
- 518 Impulsive behavior and fall risk in Parkinson's disease**
K. Smulders, R.A. Esselink, B.R. Bloem, R. Cools (Nijmegen, Netherlands)
- 519 Evaluation of driving ability in patients with Parkinson's disease using a driving simulator**
R. Andoh, W.T. Kyaw, T. Tsujii, H. Iwaki, N. Nishikawa, M. Nagai, M. Nomoto (Tohon, Japan)
- 520 Visuomotor deficits in Parkinson's disease**
Y. Kajimoto, H. Ito (Shingu City, Japan)
- 521 Apnea-hypopnea index and supine apnea-hypopnea index could be indicator for severity of cognition impairment in Parkinson's disease with cognitive impairment: Retrospective pilot study**
C.K. Ha, J.Y. Choi, E.K. Bae (Incheon, Korea)
- 522 Cognitive function and postural instability in people with Parkinson's disease**
D. Xu, M. Cole, K. Mengersen, P. Silburn, G. Kerr (Brisbane, Australia)
- 523 Defective visual perception in patients with Parkinson's disease: The impairment of preattentive visual processing in the normal intellectual patients**
Y. Higashi, M. Tabata, H. Kamada, E. Mori (Himeji, Japan)
- 524 Apathy in Parkinson's disease results from our objective apathy scale**
A. Kumon, M. Saruwatari, F. Sito, M. Kato, N. Kawashima, K. Hasegawa (Sagamihara, Japan)
- 525 Criteria for mild cognitive impairment in Parkinson's disease: Applicability and validity**
G.J. Geurtsen, B.A. Schmand, I. Litvan, J.G. Goldman, A.I. Tröster (Amsterdam, Netherlands)



Abstracts by Topic

- 526 Relationships between non-motor symptoms in Parkinson's disease, and their genetic and pathologic basis**
G. Wang, Y. Huang, W. Chen, S. Chen, Y. Wang, Q. Xiao, J. Liu, P. Sachdev, V.S.C. Fung, D. Rowe, G. Halliday, S. Chen (Sydney, Australia)
- 527 Which executive functions most affect gait in Parkinson's disease?**
C. Bedeschi Ferrari, F. Iotti, K. Guedes, A. Manfredi, D. Bauer, L. Rodrigues, M.E.P. Piemonte (São Paulo, Brazil)
- 528 Could depression confound performance on neuropsychological testing in Parkinson's disease (PD) patients?**
T.P. Lin, J.N. Caviness, J.G. Hentz, S.A. Jacobson, C.M. Belden, M.N. Sabbagh, H.A. Shill, E.D. Driver-Dunckley, T.G. Beach, C.H. Adler, Arizona Parkinson Disease Consortium (Scottsdale, AZ, USA)
- 529 Effects of istradefylline on cognitive performance in prefrontal cortex lesioned rats**
T. Kadowaki Horita, M. Kobayashi, A. Mori, P. Jenner, T. Kanda (Shizuoka, Japan)
- 530 Executive function training during gait: A new approach on the management of Parkinson's disease**
C. Bedeschi Ferrari, K. Guedes, F. Iotti, D. Bauer, A. Manfredi, L. Rodrigues, M.E.P. Piemonte (São Paulo, Brazil)
- 531 Motor timing in Parkinson's disease patients who freeze**
C.M. Tolleson, S.A. Wylie, O.C. Roman, S. Barton, M. Kubovy, D. Claassen (Nashville, TN, USA)
- 532 Montreal cognitive assessment performance in patients with Parkinson's disease with "Normal" mini-mental state examination score**
B. Tserensodnom, K. Baatar (Ulaanbaatar, Mongolia)
- 533 Fronto-striatal atrophy correlates of inhibitory dysfunction in Parkinson's disease**
C. O'Callaghan, S.L. Naismith, J.R. Hodges, S.J.G. Lewis, M. Hornberger (Sydney, Australia)
- 534 Olfactory performance acts as a cognitive reserve in non-demented patients with Parkinson's disease**
J.E. Lee, K.H. Cho, S.K. Song, Y.H. Sohn, P.H. Lee (Seoul, Korea)
- 535 Documentation of cognitive diagnoses in Parkinson's disease following deep brain stimulation**
B.R. Barton, L. Cao, C.G. Goetz, K.T. Stroupe, F.M. Weaver (Chicago, IL, USA)
- 536 The association of cognitive impairment and cerebral white matter lesion in Parkinson's disease**
R. Hayashi, T. Oeda, A. Umemura, M. Kousaka, S. Tomita, K. Yamamoto, H. Sawada (Kyoto, Japan)
- 537 Resting state brain connectivity associated with mild cognitive impairment in Parkinson's disease**
M. Amboni, A. Tessitore, G. Santangelo, M. Picillo, F. Esposito, C. Vitale, A. Giordano, R. De Micco, G. Tedeschi, P. Barone (Naples, Italy)
- 538 Cortical and subcortical brain atrophy in Parkinson's disease with visual hallucination**
H. Watanabe, J. Senda, S. Kato, M. Ito, N. Atsuta, K. Hara, T. Tsuboi, M. Katsuno, T. Nakamura, M. Hirayama, S. Naganawa, G. Sobue (Nagoya, Japan)
- 539 Visual hallucinations and motor phenotype in Parkinson's disease: Evidences from a case control study**
L. Kiferle, G. Martina, G. Palermo, C. Del Gamba, U. Bonuccelli, R. Ceravolo (Pisa, Italy)
- 540 Stereopsis deficits as a predictor of cognitive decline in Parkinson's disease**
S.B. Koh, M. Kim, H.M. Lee, J.W. Jang, S.M. Lee (Seoul, Korea)
- 541 The effects rivastigmine and atomoxetine on attention in non-demented Parkinson's disease (PD)**
J.S. Lou, D. Dimitrova, K.A. Chung, S.B. Andrea, J. Nutt (Portland, OR, USA)
- 542 Serum BDNF levels in patients with Parkinson's disease: Correlation with specific cognitive parameters**
L. Granholm, T. Turner, H. Boger, V. Hinson (Charleston, SC, USA)
- 543 Dissociable effects of subthalamic nucleus stimulation on auditory working memory performance in Parkinson's disease**
C. Camalier, J. Neimat, A. Wang, L. Gilling-McIntosh, C. Cochran (Nashville, TN, USA)
- 544 Non-motor symptoms in Parkinson's disease with mild cognitive impairment**
S. Diab, V. Latreille, P. Brayet, R. Postuma, J.A. Bertrand, C. Desjardins, I. Rouleau, J.F. Gagnon (Montreal, QC, Canada)
- 545 Cognitive performance and psychiatric symptoms in early, untreated Parkinson's disease: Results from the PPMI study**
D. Weintraub, T. Simuni, A. Siderowf, M. Troyer, C. Coffey, E. Foster, K. Hawkins (Philadelphia, PA, USA)
- 546 Potential role of nutritional supplements for the treatment of memory impairment in parkinsonisms: An update**
G. Pezzoli, E. Cassani, C. Pusani, E. Cereda, L. Iorio, R. Cilia, M. Barichella (Milan, Italy)
- 547 Cognitive function deficits are associated with mobility impairment in patients with Parkinson's disease**
T. Gurevich, A. Rosenberg, A. Ezra, N. Giladi, J. Hausdorf (Tel Aviv, Israel)
- 548 PD-MCI and PDD after eight years in incident PD patients**
B. Schmand, G. Geurtsen, M. Broeders, D.C. Velseboer, R.M. de Bie (Amsterdam, Netherlands)
- 549 Pathological organization of resting-state functional brain networks in Parkinson's disease: A longitudinal MEG graph theoretical analysis**
K.T.E. Olde Dubbelink, A. Hillebrand, D. Stoffers, J.B. Deijen, J.W.R.W. Twisk, C.J. Stam, H.W. Berendse (Amsterdam, Netherlands)
- 550 Principal component analysis of PiB distribution in Parkinson's and Alzheimer's diseases**
M.C. Campbell, J. Markham, H. Flores, J.M. Hartlein, A.M. Goate, N.J. Cairns, T.O. Videen, J.S. Perlmutter (Saint Louis, MO, USA)
- 551 Alteration of three-dimensional vision in Parkinson's disease**
A. Séverac Cauquil, F. Ory-Magne, V. Jardiné, M. Rosito, C. Brefel-Courbon, S. Celebrini (Toulouse, France)
- 552 Influence of the relevant acoustic features on the recognition of emotional prosody following subthalamic nucleus deep brain stimulation in Parkinson's disease**
J. Péron, S. Cekic, C. Haegelen, P. Sauleau, D. Drapier, M. Vérin, D. Grandjean (Geneva, Switzerland)
- 553 Do timed neuropsychological assessments confound cognitive assessment in Parkinson's disease?**
P. Hobson, J. Meara, R. Evans (Rhyl, United Kingdom)
- 554 Clinical profile of Parkinson's disease patients with pneumonia**
Y. Manor, D. Shpunt - Llivshiz, A. Rosenberg, A. Ezra, J. Knaani, N. Giladi, M. Guttman, T. Gurevich (Tel Aviv, Israel)



Abstracts by Topic

- 555 Serial DTI and cognitive decline in Parkinson's disease**
T.R. Melzer, R. Watts, M.R. MacAskill, T.L. Pitcher, L. Livingston, R. Keenan, J.C. Dalrymple-Alford, T.J. Anderson (Christchurch, New Zealand)
- 556 Distinct clinical profile in rapid eye movement sleep behavior disorder patients with mild cognitive impairment**
J.A. Bertrand, R.B. Postuma, D. Genier Marchand, C. Desjardins, J. Montplaisir, J.F. Gagnon (Montreal, QC, Canada)
- 557 Executive function and educational status interfere with functional balance and locomotion in individuals with Parkinson's disease**
C.O. Souza, M.C. Voos, J. Chen, D. Francato, H.F. Chien, F. Fonoff, J. Greve, E.T. Fonoff, E.R. Barbosa (São Paulo, Brazil)
- 558 Object / scene recognition in patients with Parkinson's disease with and without visual hallucination**
P. Maruque, F. Ory, L. Saint-Aubert, F. Remy, N. Bacon-Macé, M. Fabre-Thorpe, E.J. Barbeau, C. Brefel-Courbon (Toulouse, France)
- 559 Functional MRI abnormalities on cognitive tasks in newly diagnosed PD patients- ICICLE-PD study**
C. Nombela, J.B. Rowe, A. Hampshire, A.M. Owen, D. Breen, T.K. Khoo, M. Firbank, A. Yarmall, G. Duncan, S. Winder-Rhodes, J.T. O'Brien, D.J. Burn, D.J. Brooks, R.A. Barker (Cambridge, United Kingdom)
- 560 The association of sleep disturbances and motor severity with cognitive impairment in Parkinson's disease using the MDS-UPDRS**
J.G. Goldman, G. Stebbins, V. Leung, B. Tilley, C.G. Goetz (Chicago, IL, USA)
- 561 Visual information processings are selectively impaired in Parkinson's disease patients with normal MMS scores**
A. Kurita, M. Suzuki, M. Nakamura, S. Takagi (Kashiwa, Japan)
- 562 Mild cognitive impairment in Parkinson's disease: Cut-off and responsiveness values of the Parkinson's disease-cognitive rating scale (PD-CRS)**
J. Pagonabarraga, R. Fernández de Bobadilla, S. Martínez-Horta, B. Pascual-Sedano, A. Campolongo, J. Kulisevsky (Barcelona, Spain)
- 563 Role of vitamin B12 deficiency in cases of Parkinson's disease presenting with dementia**
S. Mishra (Hyderabad, India)
- 564 Cognitive tasks influence balance performance in people with Parkinson's disease**
D. Xu, M. Muthalib, R. Pegoraro, K. Mengersen, M. Cole, P. Silburn, G. Kerr (Brisbane, Australia)
- 565 Cognitive functioning in idiopathic Parkinson's disease**
P. Chatterjee, D. Joshi, B. Kumar (Varanasi, India)
- 566 The effects of cardiovascular exercise on cognitive function in individuals with Parkinson's disease (PD)**
J. McCamish, A. Samson, K. Vrongistinos, T. Jung (Northridge, CA, USA)
- 567 Human behavioural evidence of compromised dentate gyrus neurogenesis in PD is unrelated to poor attention and impulsivity**
K.A. Wesnes, D.S. Miller, D.J. Burn (Goring on Thames, United Kingdom)
- 568 The prevalence and nature of mild cognitive impairment in Parkinson's disease (PD-MCI) identified using automated cognitive tests**
K.A. Wesnes, D.J. Burn (Goring on Thames, United Kingdom)
- 569 Correlates of change in activities of daily living in patients with Parkinson's disease**
B. Tran, A. Darin, G. Choi, J. Rick, A. Siderowf, D. Weintraub (Philadelphia, PA, USA)
- 570 The Philadelphia brief assessment of cognition as a measure of cognitive impairment in Parkinson's disease**
A. Darin, J. Rick, J. Kitain, B. Tran, A. Boller, J. Haley, D. Weinberg, D. Libon, A. Siderowf, M. Grossman, R. Gross (Philadelphia, PA, USA)
- 571 Cognitive impairment in Parkinson's disease and its association to motor and non motor symptoms**
O.A. Trujillo, p. Lillo, M. Alvarado, D.L. Saez (Santiago, Chile)
- 572 Domain specific cognitive dysfunction in Parkinson's and associated pattern of grey matter atrophy**
J.C. Dalrymple-Alford, C.H. McCurrie, T.R. Melzer, R. Watts, M.R. MacAskill, T.L. Pitcher, R. Keenan, T.J. Anderson, L. Livingston (Christchurch, New Zealand)
- 573 Discriminating facial expressions of emotion in Parkinson's disease**
M. Marneweck, R. Palermo, G. Hammond (Crawley, Australia)
- 574 Cognitive and mood changes in untreated Parkinson's disease patients**
E. Stefanova, I. Stankovic, T. Stojkovic, G. Mandic Stojmenovic, A. Tomic, V. Markovic, M. Svetel, I. Petrovic, V. Kostic (Belgrade, Serbia)
- 575 Effects of neuropsychological training in patients with Parkinson's disease: A cluster randomised controlled trial**
A. Petrelli, J. Kessler, M.T. Barbe, L. Timmermann, E. Kalbe (Vechta, Germany)

Parkinson's disease: Neuropharmacology

- 576 Pharmaceutical quality of seven generic levodopa/benserazide products compared with original Madopar® / levodopa and benserazide**
U. Gasser, A. Fischer, J. Timmermans, G. Vital-Durand, I. Arnet (Basle, Switzerland)
- 577 Nicotine neuroprotects against maneb- and paraquat-induced Parkinson's disease phenotype in mouse by augmenting cytochrome P450 2d22 expression**
G. Srivastava, A. Dixit, S. Yadav, D.K. Patel, O. Prakash, M.P. Singh (Lucknow, India)
- 578 Effect of minocycline, levodopa and MnTMPyP on maneb- and paraquat-induced Parkinson's disease phenotype: Role of mitochondria**
A. Dixit, G. Srivastava, D. Verma, M. Mishra, P.K. Singh, O. Prakash, M.P. Singh (Lucknow, India)
- 579 Primary care physician decision-making in early Parkinson's disease**
J. Fleisher, N. Lipitz, N. Dahodwala (Philadelphia, PA, USA)
- 580 Behavioural, biochemical and cellular correlates in the neuroprotective potential of HMG-CoA reductase inhibitors (atorvastatin and simvastatin) against 6-hydroxydopamine (6-OHDA) induced Parkinson-like symptoms in rats**
J. Mishra, N. Sharma, A. Kumar (Chandigarh, India)
- 581 Puerarin protect dopamine neurons by inhibiting oxidative stress in rotenone-based models for Parkinson's disease**
N. Xiong, X. Zhang, J. Xiong, L. Liu, J. Yang, G. Zhang, J. Huang, T. Wang (Wuhan, China)



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- 582 Fenpropathrin causes degeneration and protein aggregation in SH-SY5Y cells**
N. Xiong, J. Xiong, L. Liu, J. Yang, X. Zhang, J. Huang, T. Wang (Wuhan, China)
- 583 Less and well known side effects of dopamine agonists in Parkinson's disease: Comparison of ropinirole and pramipexole**
Y. Seçil, G. Eryasar, T.K. Incesu (Izmir, Turkey)
- 584 Early use of amantadine to prevent or delay onset of levodopa-induced dyskinesia in Parkinson's disease**
A. Jahangirvand, A. Rajput (Saskatoon, SK, Canada)
- 585 Levodopa-induced migraine in Parkinson's disease**
S.A. Gunzler (South Euclid, OH, USA)
- 586 Scoring by patients, caregivers and physicians shows the benefit of tolcapone on non motor symptoms in Parkinson's disease: The TANIMOS study**
T. Müller (Berlin, Germany)
- 587 Inosine inhibited the neurotoxicity of MPTP on the dopaminergic neurons**
T. Tsujii, M. Kubo, H. Iwaki, W.T. Kyaw, N. Nishikawa, M. Nagai, R. Andoh, F. Islam, M. Nomoto (Tohon, Japan)
- 588 If Parkinson's disease patients are heavy smokers, they do not crave regularly - Why?**
M.H. Strothjohann, G.A. Fuchs (Bad Camberg, Germany)
- 589 Performance of a task learned when "on" deteriorates when subsequently practiced in "off" state**
E.D. Anderson, E. Murdock, H. Fay, J.G. Nutt (Portland, OR, USA)
- 590 Are branded and generic extended-release ropinirole formulations equally efficacious? A rater-blinded, switch-over, multicenter study**
E. Bosnyák, M. Herceg, E. Pál, Z. Aschermann, J. Janszky, I. Késmárki, S. Komoly, T. Dóczi, K. Karádi, F. Nagy, N. Kovács (Pécs, Hungary)
- 591 A nonhuman primate Parkinson model that recapitulates major motor and cognitive aspects of Parkinson's disease**
J. Schneider, Q. Li, J. Yang, E. Pioli, A. Crossman, E. Bezard (Philadelphia, PA, USA)
- 592 Effects of istradefylline alone and in combination with levodopa on motor and cognitive function in a non-human primate Parkinson model**
J. Schneider, Q. Li, J. Yang, E. Pioli, A. Crossman, E. Bezard (Philadelphia, PA, USA)
- 593 Chronic treatment with MPEP, an mGlu5 receptor antagonist, normalizes basal ganglia glutamate neurotransmission in L-DOPA-treated parkinsonian monkeys**
N. Morin, M. Morissette, L. Grégoire, B. Gomez-Mancilla, F. Gasparini, T. Di Paolo (Quebec, QC, Canada)
- 594 Identifying the transcriptomic signature of L-DOPA-induced dyskinesias**
L.M. Smith, E.J. Duncan, L.C. Parr-Brownlie, M.A. Black, P.K. Dearden, J.N.J. Reynolds (Dunedin, New Zealand)
- 595 Endothelial dysfunction is associated with hyperhomocysteinemia in Parkinson's disease**
J.H. Yoon, J.M. Hong, S.W. Yong (Suwon, Korea)
- 596 The EuroInf study: A multi-centre European comparative study of apomorphine versus intrajejunal levodopa infusion in a real life cohort of Parkinson's patients**
P. Reddy, P. Martinez-Martin, A. Todorova, A. Antonini, P. Odin, A. Martin, A. Rizos, D. Calandrella, T. Henriksen, N. Bryndum, A. Glad, S. Dafsari, L. Timmermann, G. Ebersbach, M. Kramberger, A. Ceballos-Baumann, K. Wenzel, V. Tomantschger, A. Storch, H. Reichmann, Z. Pirtosek, M. Trost, R. Katzenschlager, P. Svenningsson, S. Palhagen, J. Volkmann, K.R. Chaudhuri, The Movement Disorder Society Non Motor Study Group (London, United Kingdom)
- 597 Elevated homocysteine by levodopa is detrimental to neurogenesis in parkinsonian model**
J.Y. Shin, Y.H. Ahn, M.J. Paik, H.J. Park, M.K. Sunwoo, J.Y. Hong, J.E. Lee, Y.H. Sohn, P.H. Lee (Seoul, Korea)
- 598 Audit on patients with idiopathic Parkinson's disease attending the university neurology clinic (UNC), Teaching Hospital Galle, Sri Lanka**
D.A.J. Chandrika, K.D. Pathirna (Galle, Sri Lanka)
- 599 Benefit, compliance and side effects of anti-Parkinson medication in Sri Lankan patients with idiopathic Parkinson's disease**
K.D. Pathirana, J. Chandrika (Galle, Sri Lanka)
- 600 Investigating the neuroprotective effects of valproate, an epigenetic histone deacetylase inhibitor, in Parkinson's disease using preclinical magnetic resonance imaging**
I.F. Harrison, D.T. Dexter (London, United Kingdom)
- 601 Efficacy and safety of 24 hour rotigotine transdermal patch in the treatment of advanced Parkinson's disease: A meta-analysis**
G.M.I. Ramiro, N.L. Fabiania, R.D.G. Jamora (Manila, Philippines)
- 602 The effectiveness of pramipexole and ropinirole in early and advanced Parkinson's disease and comparison of the results with each other**
M. Yaman, F. Karakaya, I. Ceviz, S. Öztürk, Ö.Y. Küsbeci (Afyonkarahisar, Turkey)
- 603 Adverse drug reactions with selegiline and rasagiline compared to levodopa and ropinirole: A study in the French pharmacovigilance database**
S. Perez-Lloret, M.V. Rey, J.L. Monstastruc, O. Rascol (Toulouse, France)
- 604 High-dose immunoglobulin treatment protects against 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine-induced dopaminergic neuron death in mice**
H. Miwa, I. Nakanishi, H. Ishiguchi, K.I. Wada, Y. Machida, N. Hattori (Tokyo, Japan)
- 605 European multicentre study of tolerability and impulse control disorders with short and extended release dopamine agonists in real life PD**
A. Rizos, P. Martinez-Martin, A. Martin, T. Henriksen, B. Kessel, I. Koch, G. Durner, S. Bassi, L. Gallagher, M. Parry, A. Antonini, P. Odin, C. Falup-Pecurariu, M. Silverdale, G. MacPhee, K. Ray-Chaudhuri, On Behalf of EUOPAR, The MDS Non Motor Study Group (London, United Kingdom)
- 606 Parkinson's disease treatment in Africa: The importance of the levodopa content of legumes**
G. Pezzoli, E. Cassani, A. Akpalu, M. Cham, G. Privitera, P. De Marco, R. Cilia, A. Zecchinelli, A. Bonetti, L. Iorio, E. Cereda, M. Barichella (Milan, Italy)



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- 607 The synthetic opioid nalbuphine reduces L-dopa-induced dyskinesia in non-human primates**
L.F. Potts, A. Greven, B.L. Dyavar Shetty, J.S. Whithear, S.P. Braithwaite, M. Voronkov, S.M. Papa, M.M. Mouradian (Atlanta, GA, USA)
- 608 Exploration of curcumin analogues as inhibitors of α synuclein aggregation for treatment of Parkinson's disease (PD) – A preliminary report**
N. Ahsan, S. Mishra, A. Suroliya, S. Gupta (New Delhi, India)
- 609 Vitamin D deficiency: As a role for Parkinson's disease (PD) or as an outcome of PD?**
A.P. Tanhaei, M. Izady, A. Chitsaz, R. Meamar (Isfahan, Iran)
- 610 Tenuigenin attenuates over-expressing alpha-synuclein induced cytotoxicity via down-regulating polo-like kinase 3**
J. Zhou, H. Zhang, Y. Huang, G. Halliday, X. Wang (Beijing, China)
- 611 Can serotonergic antidepressants prevent or delay the development of L-dopa induced dyskinesias in PD patients?**
S. Mazzucchi, D. Frosini, E. Unti, E. Del Prete, C. Del Gamba, U. Bonuccelli, R. Ceravolo (Pisa, Italy)
- 612 Effects of chronic D2/3 agonist ropinirole medication on rodent models of gambling behaviour**
M. Tremblay, J.G. Hosking, C.A. Winstanley (Vancouver, BC, Canada)
- 613 Mydriasis in a Parkinson's disease patient on low-dose carbidopa/levodopa**
D.J. Burdick, A. Griffith, A. Cole, C.M. Sia, P. Agarwal (Kirkland, WA, USA)
- 614 Expression of dopamine receptors in peripheral lymphocytes: Further evidence of neuroinflammatory mechanisms in Parkinson's disease and beyond**
A.L. Teixeira, N.P. Rocha, P.L. Scalzo, P.P. Christo, M.S. Souza, E.L. Vieira, H.J. Reis (Belo Horizonte, Brazil)
- 615 Adaptive changes in autophagy after UPS impairment in Parkinson's disease**
W. Le, Y. Shen, Y. Tang, X. Zhang (Shanghai, China)
- 616 Serotonin syndrome induced by rasagiline**
A. Esquivel Lopez (Madrid, Spain)
- 617 Rasagiline in de novo Parkinson's disease: A retrospective longitudinal case-control study**
M. Canesi, R. Cilia, G. Pezzoli (Milan, Italy)
- 618 An open-label study on adding rotigotine treatment to low dose of pramipexole or ropinirole in patients with advanced Parkinson's disease**
J.M. Kim, S.J. Chung, J.W. Kim, S. Thierfelder, L. Bauer, B.S. Jeon (Seongnam-Si, Korea)
- 619 Time-to-levodopa depending on initial PD medication: A retrospective cohort study**
J.P. Reese, U.O. Mueller, W.H. Oertel, R. Dodel, K. Kostev (Marburg, Germany)
- 620 Outcomes from a large clozapine Parkinson's registry**
N. Hack, J. Romrell, A. Hardwick, N. McFarland, A. Wagle-Shukla, J.R. Rodriguez, M. Okun (Gainesville, USA)
- 622 Characteristics of obstructive sleep apnea in patients with Parkinson's disease**
T. Nomura, Y. Inoue, K. Nakashima (Yonago, Japan)
- 623 Withdrawn by Author**
- 624 Plasma urate in REM sleep behavior disorder**
R. Uribe-San Martín, P.F. Venegas, F.I. López, A.G. Jones, J.R. Salazar, J.F. Godoy, J.M. Santín, C. Juri (Santiago, Chile)
- 625 Quality of sleep in drug naive patients with early Parkinson's disease and effect of dopaminergic treatment: A prospective study**
S.P. Joy, P.K. Pal, S. Sinha, A.B. Taly, M. Philip (Bangalore, India)
- 626 The impact of daytime napping on executive cognitive dysfunction in Parkinson's disease**
S.J. Bolitho, S.L. Naismith, S.J. Lewis (Sydney, Australia)
- 627 The association of sleep quality with mood symptoms in PD patients with RLS – A case control study**
A.Q. Rana, Y. Mujawaz, M.A. Rana (Toronto, ON, Canada)
- 628 REM sleep behavior disorder after bilateral subthalamic stimulation in Parkinson's disease**
G. Ehm, Y.E. Kim, B.S. Jeon, Y.J. Jung, J.Y. Kim (Seoul, Korea)
- 629 REM sleep behavior disorder in Parkinson's disease: Association with abnormal ocular motor findings**
Y.E. Kim, B.S. Jeon, H. Park, Y.J. Jung, H.J. Kim (Seoul, Korea)
- 630 Excessive chin EMG activity during rapid eye movement sleep in Parkinson's disease: Is a marker?**
Y. Shen, K.P. Xiong, Y. Gong, X.Y. Zhang, W.D. Hu, J.M. Xu, J. Cheng, C.F. Liu (Suzhou, China)
- 631 The decrease of sleep apnea in Parkinson's disease associated with excessive electromyography (EMG) activity**
K.P. Xiong, Y. Gong, Y. Shen, Q. Tang, J.M. Xu, J. Cheng, C.F. Liu (Suzhou, China)
- 632 Do the presence of REM sleep behavior disorder (RBD) and time course of RBD play a vital role in altering clinical manifestations and sleep parameters of Parkinson's disease?**
Y. Gong, K.P. Xiong, Y. Shen, Q. Tang, C.J. Mao, J.M. Xu, J. Cheng, C.F. Liu (Suzhou, China)
- 633 Modulation of Na-K ATPase activity of rat brain synaptosome by norepinephrine and serotonin**
S. Sinha (Allahabad, India)
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- 621 Sleep disturbance in patients with Parkinson's disease presenting with leg motor restlessness**
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- 668 Responsivity of the fragile X-associated tremor ataxia syndrome rating scale**
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- 675 Novel APTX mutation in a girl from Colombia affected by AOA1**
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- 676 No co-segregation of periodic legs movements/restless legs syndrome and spinocerebellar ataxia type 2: Preliminary evidences**
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- 677 Insight into psychopathological involvement of spinocerebellar ataxia type 2: A study using event-related evoked potentials**
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- 700 Clinical and neurophysiologic characterization of 4 German families with spinocerebellar ataxia type 14**
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- 702 Movement disorders in autosomal dominant spinocerebellar ataxias: A prospective multicenter NIH cohort study**
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- 707 A rare co-occurrence of two commonest Indian spinocerebellar ataxia subtypes: SCA2 2 and SCA12 in a family**
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740 **High-frequency repetitive transcranial magnetic stimulation (rTMS) improved the cognitive behavior and hippocampal synaptic plasticity of aged mice**

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741 **Interactions between sensory and motor circuits in human primary motor cortex**

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742 **A novel approach to induce human cortical plasticity using cortical disinhibition**

R.F. Cash, T. Murakami, G.W. Thickbroom, U. Ziemann (Toronto, ON, Canada)

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743 **Safety assessment of atlas-base coordinates of targets for stereotactic bilateral striatal neural transplantation: Clinical case series of 22 patients with Huntington's disease**

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744 **Huntington's disease: A retrospective analysis in two centers of Buenos Aires-Argentina**

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746 **A systematic review of the behavioural symptoms in Huntington's disease: A cross-sectional and longitudinal approach**

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747 **Longitudinal analysis of putaminal volume in Huntington's disease: The IMAGE-HD study**

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748 **Clinical balance impairment associated with Huntington's disease as assessed by the mini-BESTest**

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749 **Late onset Huntington's disease: An unusual presentation with predominant psychiatric symptoms and gait disorders**

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750 **Juvenile Huntington's disease, clinical and genetics characteristics of patients from Argentina**

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751 **Mutant huntingtin impair mitochondrial movement and trafficking in hippocampal neurons**

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752 **Assessment of speech therapy efficacy in Huntington's disease (HD) by caregivers**

S. Clémence, A. Inès, G. Léa, E. Isabelle, M. Dominique, K. Pierre, D. Alain, Réseau Huntington de Langue Française, European Huntington's Disease Network (Lille, France)

753 **Enroll-HD: An innovative clinical research platform to support Huntington's disease research**

J.D. Giuliano, O. Handley, G.B. Landwehrmeyer, C. Sampaio (Princeton, NJ, USA)

754 **Characterization of a novel striatal-specific non-human primate model of Huntington's disease**

R. Aron Badin, G. Callander, A. Bemelmans, N. Dufour, M. Guillermier, C. Jan, A. Petersén, N. Déglon, D. Kirik, H. Philippe (Fontenay-aux-Roses, France)

755 **Targeting neuro-inflammatory cytokines and oxidative stress by minocycline attenuates quinolinic acid-induced Huntington's disease-like symptoms in rats**

H. Kalonia, A. Kumar, J. Mishra (Chandigarh, India)

756 **Mutant huntingtin fragmentation in immune cells tracks Huntington's disease progression**

E.J. Wild, A. Weiss, U. Trager, S. Grueninger, R. Farmer, C. Landles, R. Scahill, N. Lahiri, S. Haider, D. Macdonald, C. Frost, G. Bates, G. Bilbe, R. Kuhn, R. Andre, S. Tabrizi (London, United Kingdom)

757 **FTY720 is neuroprotective in Huntington's disease**

V. Maglione, A. Di Pardo, E. Amico, M. Favellato, R. Castrataro, S. Fucile, F. Squitieri (Pozzilli (IS), Italy)



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- 760 Progression in cognitive function of Huntington patients relative to controls: A 12 months study**
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- 818 Davunetide for PSP: Results of the AL-108-231, phase 2/3, 52 week, randomized, double-blind, placebo-controlled clinical trial**
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- 824 Dynamics of red flags in multiple system atrophy: An analysis of the EMSA-SG natural history study cohort**
F. Krismer, S. Duerr, K. Seppi, S. Boesch, W. Poewe, G.K. Wenning, On Behalf of EMSA-SG (Innsbruck, Austria)
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- 827 Accuracy of portable polygraphy for the diagnosis of sleep apnea in MSA**
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- 1011 Movement deficits produced by inferior olive lesion are subdivision specific**
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- 1012 The effect of cerebellar disease (CD) and Parkinson's disease (PD) on lower limb intersegmental covariation in linear and circular locomotion with and without vision**
S.D. Israeli-Korn, A. Barliya, C. Paquette, E. Franzén, R. Inzelberg, F. Horak, T. Flash (Rehovot, Israel)



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- 1013 Post-traumatic hemifacial spasm (t-HFS), a rare cause of HFS with unusual clinical features**
D. Reyes, K. Kurako, S. Baez-Torres, N. Galvez-Jimenez (Weston, FL, USA)
- 1014 L-PGDS could be a surrogate marker of frontal lobe dysfunction in idiopathic NPH**
N. Nishida, N. Nagata, H. Toda, M. Ishikawa, Y. Urade, K. Iwasaki (Osaka, Japan)
- 1015 Expanded cell cultures from brain samples in living patients with Parkinson's disease**
H. Xu, L. Belkacemi, M. Jog, A. Parrent, M.O. Hebb (London, ON, Canada)
- 1016 RNAi-mediated knockdown of VPS35 impairs α -synuclein degradation by inhibiting the maturation of cathepsin D**
E. Miura, T. Hasegawa, M. Konno, N. Sugeno, A. Kikuchi, T. Baba, M. Aoki, A. Takeda (Sendai, Japan)
- 1017 Role of the ubiquitin proteasome system and the lysosomal system in PINK1-/- parkin-dependent mitophagy in human primary fibroblasts**
K. Shurkewitsch, A. Rakovic, C. Klein (Lübeck, Germany)
- 1018 Cholinergic olfactory centrifugal inputs are reduced in patients with neurodegenerative disorders and MPTP treated monkeys**
I.C. Mundiñano, M. Hernandez, C. Ordoñez, C. Di Caudo, I. Marcilla, T. Tuñon, M.R. Luquin (Pamplona, Spain)
- 1019 Parkinson's disease and nociceptive response: Spinal opioidergic modulation on the mechanical hyperalgesia in hemiparkinsonian rats**
R.L. Pagano, M.B. Berzuino, A.C.P. Campos, E.T. Fonoff (Sao Paulo, Brazil)
- 1020 Expression of synaptic proteins in normally aging human substantia nigra pars compacta**
P.A. Alladi, A. Mahadevan, S.K. Shankar, T.R. Raju (Bangalore, India)
- 1021 The role of aldehyde dehydrogenase on the pathogenic mechanism of Parkinson's disease**
T.H. Yeh, C.C. Chiu, H.L. Wang, S.C. Lai, H.C. Chang, Y.J. Chen, C.H. Chen, D. Mochly-Rosen, C.S. Lu (Taipei, Taiwan)
- 1022 The effect of dyskinesia on gait in Parkinson's disease**
M. Danoudis, J. McGinley, R. Iansek (Cheltenham, Australia)
- 1023 The regulation of the male sex-determining gene SRY in Parkinson's disease models**
D.P. Czech, J. Lee, J. Correia, E. Moller, V. Harley (Clayton, Australia)
- 1024 Copper pathology in the vulnerable substantia nigra in Parkinson's disease**
K.M. Davies, S. Bohic, R. Ortega, V. Cottam, D.J. Hare, J.P.M. Finberg, G. Halliday, J.F.B. Mercer, K.L. Double (Sydney, Australia)
- 1025 Serotonin dysfunction in Parkinson's disease does not correlate with levodopa-induced dyskinesias**
P. Cheshire, S. Ayton, K. Bertram, H. Ling, S.S. O'Sullivan, A. Li, G. Halliday, C. McLean, T. Revesz, D.I. Finkelstein, E. Storey, D.R. Williams (Melbourne, Australia)
- 1026 Synaptic dysfunction implicated in leucine-rich repeat kinase-2 (LRRK2) R1441G knockin mice**
P.W.L. Ho, H.F. Liu, S. Lu, Z.H.M. Tse, M.H.W. Kung, Z.J. Zhou, D.B. Ramsden, S.L. Ho (Hong Kong, China)
- 1027 The neuroinflammatory response induced by MPTP is altered in mice lacking the type-I interferon- β receptor-1 (IFNAR1)**
J.M. Taylor, B.S. Main, M. Zhang, S. Ayton, D. Finkelstein, P.J. Crack (Melbourne, Australia)
- 1028 Structural analysis of α -synuclein by small-angle X-ray (SAXS) and neutron (SANS) scattering**
K. Araki, H. Kujirai, S. Fujiwara, H. Yagi, H. Mochizuki (Suita, Japan)
- 1029 The value of dehydroepiandrosterone sulfate determination in the diagnosis of early forms of Alzheimer's disease**
F. Yunusov, R. Gulnora, T. Dilshod (Tashkent, Uzbekistan)
- 1030 Loss of DJ-1 function alters disease course and shortens survival of mutant SOD1 mice**
N. Lev, Y. Barhum, I. Lotan, I. Steiner, E. Melamed, D. Offen (Ramat Gan, Israel)
- 1031 Towards a lesion model of early stage MSA-P with partial L-DOPA failure: A novel testbed for targeted cell therapy**
C. Kaindlstorfer, J. García, N. Stefanova, W. Poewe, C. Winkler, M. Döbrössy, G. Wenning (Innsbruck, Austria)
- 1032 Loss of DJ-1 functions attenuates astrocytes neuroprotective abilities**
N. Lev, Y. Barhum, T. Ben-Zur, E. Melamed, I. Steiner, D. Offen (Ramat Gan, Israel)
- 1033 Cholinergic cell loss and altered morphology accompanied by structural changes affecting the pedunculopontine nucleus in the lactacystin rat model of Parkinson's disease**
I.F. Harrison, A. Bury, D.T. Dexter, I.S. Pienaar (London, United Kingdom)
- 1034 Therapeutic approach to Parkinson's disease by modifying α -synuclein expression**
H. Yamakado, T. Asano, R. Takahashi (Kyoto, Japan)
- 1035 Uncovering early markers of Parkinson's disease pathological progression using proteomics**
S.N. Pressey, C.E. Murray, W. Heywood, S.M. Gentleman, K. Mills, J.L. Holton, S. Gandhi, T. Revesz (London, United Kingdom)
- 1036 PBT434, a novel 8-hydroxyquinazolinone, preserves nigrostriatal circuitry, improves motor performance and inhibits alpha synuclein accumulation in animal models of Parkinson's disease by modulation of iron homeostasis**
D.I. Finkelstein, J.L. George, P.A. Adlard, C.L. Masters, D.J. Hare, P.A. Doble, E. Gautier, J. Parsons, G. Kok, P. Huggins, K.J. Barnham, A.I. Bush, R.A. Cherny (Melbourne, Australia)
- 1037 Humoral response against glial derived antigens in Parkinson's disease**
E. Papuc, J. Kurzepa, E. Kurys, A. Grabarska, W. Krupski, K. Rejdak, Z. Stelmasiak (Lublin, Poland)
- 1038 Extracellular alpha-synuclein enhanced cell survival in neuronally differentiated SHSY-5Y cells at nanomolar concentration via AKT pathway**
J.Y. Kim, H.J. Kim, B.S. Jeon (Seoul, Korea)
- 1039 Overexpression of cannabinoid CB2 receptors attenuated the progressive motor impairment and nigrostriatal dopaminergic neurons loss in MitoPark mouse**
F. Navarrete-Rueda, J.M. Pérez-Ortiz, M.S. Garcia-Gutierrez, J.A. Molina-Arjona, C. Leiva-Santana, J. Manzanera (San Juan de Alicante, Spain)
- 1040 Protective potential of 17-beta-estradiol on membrane linked functions in aging female rats: A behavioral, biochemical and ultrastructural study**
P. Kumar, R.K. Kale, N.Z. Baquer (New Delhi, India)



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- 1041 Withdrawn by Author**
- 1042 Saskatoon brain safety deposit model – Clinicopathological studies of movement disorders**
A. Rajput, A.H. Rajput (Saskatoon, SK, Canada)
- 1043 Acute impedance changes during programming of corresponding stimulation estimates**
G.K. Steinke, S. Carcieri, A. Jackson, C. Zhu, H. Haut, W. Stoffregen, L. Wojick (Santa Clarita, CA, USA)
- 1044 Altered protein homeostasis and bioenergetics in fibroblasts derived from patients with Parkinson's disease**
F. Blandini, G. Ambrosi, C. Ghezzi, R. Zangaglia, B. Minafra, C. Pacchetti, S. Sepe, M.T. Armentero, P.G. Mastroberardino (Pavia, Italy)
- 1045 Effects of quadripulse stimulation over medial frontal cortex on human visuomotor sequence learning**
T. Shimizu, R. Hanajima, R. Tsutsumi, Y. Shirota, N. Tanaka, S. Matsuda, Y. Terao, Y. Ugawa (Tokyo, Japan)
- 1046 Study of saccadic eye movement abnormalities in patients of young onset Parkinson's disease as compared to idiopathic Parkinson's disease**
V. Goyal, N. Jain, S. Sood, G. Shukla, M. Behari (New Delhi, India)
- 1047 Alterations in glutamate kinetic parameters and alpha-synuclein expression in middle-aged mice with a partial reduction of GDNF**
H.A. Boger, W.D. Wynn, A. Quattlebaum, R.A. Gregory, K.L. Helke (Charleston, SC, USA)
- 1048 Viable Gaucher's disease model of medaka fish completely deficient in glucocerebrosidase activity developed alpha-synuclein aggregation in the brain**
N. Uemura, H. Matsui, T. Fujiwara-Ishikawa, M. Kinoshita, M. Koike, H. Yamakado, K. Uemura, Y. Uchiyama, T. Todo, S.I. Takeda, R. Takahashi (Kyoto, Japan)
- 1049 Using the anterior olfactory nucleus to study lewy pathology in olfactory structures**
S. Rajan, R. Bandopadhyay, A. Kingsbury, H. Ayling, W. Sterlacci, W. Poewe, H. Maier, M. Ezquerro, A. Lees, T. Revesz, L. Silveira-Moriyama (London, United Kingdom)
- 1050 Overexpression of A53T alpha-synuclein in cynomolgus macaques produces a synucleinopathy and results in reductions in nigral dopamine neurons and striatal dopamine levels**
J.B. Koprach, T.H. Johnston, J.M. Brotchie (Toronto, ON, Canada)
- 1051 The aged rodent brain displays higher susceptibility to alpha-synuclein toxicity**
C.E. Sortwell, S.E. Gombash, N.C. Kuhn, S.L. Wohlgenant, L.D. Fischer, B.F. Daley, T.J. Collier, J.W. Lipton, A. Cole-Strauss, S.M. Fleming, F.P. Manfredsson (Grand Rapids, MI, USA)
- 1052 Catecholamine substrates of behavioral inflexibility in a rat model of Parkinson's disease**
E.M. Vazey, K.M. Fender, Z.A. Cope, S.B. Floresco, G. Aston-Jones (Charleston, SC, USA)
- 1053 Chaperone-mediated regulation of JNK signalling in dopaminergic cell death**
S.K. Kalia, H. Chau, L.V. Kalia, A.M. Lozano (Toronto, ON, Canada)
- 1054 Glutamate receptors in cerebellar cortex of essential tremor and controls**
A. Rajput, C. Luo, A.H. Rajput (Saskatoon, SK, Canada)
- 1055 Annonacin, a natural lipophilic mitochondrial complex I inhibitor, increases phosphorylation of tau in the brain of FTDP-17 transgenic mice**
G. Respondek, E.S. Yamada, S. Müssner, A.C.F. de Andrade, M. Höllerhage, C. Depienne, A. Tarze, B. Friguet, M. Salama, V.M.Y. Lee, P. Champy, W.H. Oertel, G.U. Höglinger (Munich, Germany)
- 1056 Altered cortical but not thalamic connectivity in the direct and indirect pathways in hemiparkinsonian Drd1a-tdTomato BACtransgenic mice**
M.V. Escande, I.R. Taravini, J.E. Belforte, M.G. Murer (Buenos Aires, Argentina)
- 1057 Gene expression in skin of Parkinson's disease patients**
A. Planken, L. Kadastik-Eerme, L. Kurvits, S. Rincken, J. Pilv, E. Reimann, K. Kingo, S. Kõks, P. Taba (Tartu, Estonia)
- 1058 Long-term expression of viral vector-delivered A53T alpha-synuclein produces sustained signs of dopaminergic dysfunction in a rat model of Parkinson's disease**
J.B. Koprach, P. Huot, P. Ravenscroft, T.H. Johnston, J.M. Brotchie (Toronto, ON, Canada)
- 1059 Systemic distribution of lewy body pathology in an aging cohort**
S. Murayama, M. Takao, H. Hatsuta, H. Sumikura, S. Ito, A. Nogami, A. Uchino, Y. Saito (Tokyo, Japan)
- 1060 Photobiomodulation inside the brain: A novel method of intracranial application of near-infrared light and its impact on dopaminergic cell survival in MPTP-treated mice**
C. Moro, N. el Massri, N. Torres, D. Ratel, C. Chabrol, F. Perraut, A. Bourgerette, S. Purushothuman, D. Johnstone, J. Stone, J. Mitrofanis, A.L. Benabid (Sydney, Australia)
- 1061 Correlation of vascular Parkinsonism course with the different forms of dementia**
I.V. Verulashvili, M.G. Kortushvili (Tbilisi, Georgia)
- 1062 Epilepsy: A global dilemma**
R.N. Mbugua (Nairobi, Kenya)
- 1063 Anti-basal antibodies in multiple system atrophy**
D.A. Labunskiy, V.V. Poleshchuk, S.G. Morozov (Santa Rosa, CA, USA)
- 1064 Aging, dopaminergic midbrain areas and behaviour in chronic experimental Parkinsonism**
C.M. Campuzano, J.E. Yuste, R.B. Francisco, E. Tarragon, C. Estrada, D. Lopez, A. Gomez, C.M. Ros, E. Fernandez-Villalba, M.T. Herrero (Castellò de la Plana, Spain)
- 1065 Analysis of structural plastic changes underlying L-DOPA induced dyskinesias in an animal model of parkinsonism**
I. Taravini, L.M. Suárez, G. Gómez, M. Escande, L. Rela, R. Moratalla, G. Murer, O. Gershanik (Buenos Aires, Argentina)
- 1066 Selegiline and L-DOPA modulate the number of newborn neurons in the olfactory bulb in an acute 6-OHDA mouse model of Parkinson's disease**
W.H. Chiu, T. Carlsson, C. Depboylu, W.H. Oertel, G.U. Höglinger, V. Ries (Marburg, Germany)
- 1067 Both acetylated and unacetylated ghrelin confer neuroprotection on mesencephalic neurons against various toxins**
J. Wagner, B. Arns, A. Grünewald, M.M. Unger, W.H. Oertel, V. Ries, D. Alvarez-Fischer (Lübeck, Germany)
- 1068 This study was conducted to see therapeutic effect of rTMS on writer's cramp**
C. Goyal, V. Goyal (New Delhi, India)



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- 1069 Awareness about movement disorders in medical fraternity: The fact**
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- 1070 Clinical characteristics of 10 patients displaying psychogenic movement disorders in a tertiary clinic in Turkey**
H. Apaydin (Istanbul, Turkey)
- 1071 Associations between clinical and performance measures with self-restricted driving practices in older adults with Parkinson's disease**
A.M. Crizzle, A.M. Myers, Q.J. Almeida, E. Roy (Hamilton, ON, Canada)
- 1072 Familial functional movement disorders**
M. Stamelou, G. Cossu, M. Edwards, D. Murgia, I. Parees, M. Melis, K.P. Bhatia (London, United Kingdom)
- 1073 A Parkinson's disease nurse specialist course for East Africa**
R. Walker, L. Ebenezer, C. Dotchin, L. Hind, M. Msuya, M. Daniels, J. Hooker (North Shields, United Kingdom)
- 1074 Effectiveness of self-efficacy learning program for newly diagnosed Parkinson's disease (PD) patients: 3 month interim report**
D. Cook, C. McRae, R. Kumar (Denver, CO, USA)
- 1075 Strength training for mobility in neurological rehabilitation is not task-specific: A systematic review**
G. Williams, M. Kahn, A. Randall (Melbourne, Australia)
- 1076 Involuntary movements in brainstem stroke as seizure-mimics**
S. Jaiswal, N. Chaudhary, J.M.K. Murthy (Hyderabad, India)
- 1077 European guidelines for physiotherapy in Parkinson's disease**
S.H.J. Keus, M. Munneke, M. Graziano, J. Paltamaa, E. Pelosin, J. Domingos, S. Brühlmann, B. Ramaswamy, J. Prins, C. Struiksmas, A.N. Nieuwboer, B.R. Bloem (Amsterdam, Netherlands)
- 1078 Creative, curiosity driven research question generation and project development around Parkinson's disease, at an international Parkinson's disease summer school, report on 4 years process improvement**
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- 1079 Training the next generation of neurologists: Movement disorders education for residents**
A.L. Molinari, M. Turchan, A.D. Currie, T.L. Davis, F.T. Phibbs, P.D. Charles (Nashville, TN, USA)
- 1080 Diagnostic disagreement in movement disorders**
A. Killoran (Morgantown, WV, USA)
- 1085 Active pharmacovigilance and Parkinson's disease: Identifying vulnerable populations at risk of developing cancers or experiencing negative cardiovascular effects**
J.A.G. Crispo, D. Krewski (Ottawa, ON, Canada)
- 1086 Frequency of mild parkinsonian signs in a population-based cohort**
M. Kasten, J. Graf, V. Tadic, E.J. Vollstedt, A. Lorwin, S. Tunc, J. Hampf, L. Piskol, M. Al-Khaled, S. Wolff, N. Brüggemann, A. Schmidt, E. Peters, A. Katalinic, H. Raspe, J. Hagenah, C. Klein (Luebeck, Germany)
- 1087 Prevalence and clinical characteristics of post-stroke movement disorders after acute ischemic stroke**
W.T. Yoon, B.C. Suh, H.S. Moon, P.W. Chung, Y.B. Kim (Seoul, Korea)
- 1088 Time to levodopa treatment initiation in a multicentric cohort: The Mexican national registry**
M. Rodríguez-Violante, A. Cervantes-Arriaga, M. López-Ruiz, I. Estrada-Bellmann, C. Zuñiga-Ramírez, D. Martínez-Ramírez, H. Morales-Briceño (Mexico City, Mexico)
- 1089 Trends in anti-Parkinsonian medication use in New Zealand: 1995-2011**
T.L. Pitcher, M.R. MacAskill, T.J. Anderson (Christchurch, New Zealand)
- 1090 Delayed hits and misses in the diagnosis of Parkinson's disease**
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- 1091 Movement disorders after stroke**
M. Chraa, N. Kissani (Marrakesh, Morocco)
- 1092 Prevalence of restless legs syndrome and REM behavior disorder in a population-based sample in Northern Germany**
S. Wolff, J. Graf, J. Hagenah, C. Klein, M. Kasten (Luebeck, Germany)
- 1093 Exploring determinants of progression of Parkinson's disease**
Y. Orlev, G. Yahalom, O.S. Cohen, R. Inzelberg, E. Kozlova, U. Goldbourt, S. Hassin-Baer (Ramat-Gan, Israel)
- 1094 The association of environmental risk factors and family history in young-onset versus late-onset Parkinson's disease**
J.Y. Hor, T.T. Lim, C.S.T. Lim, J.H. Cho, G.B. Eow, P.E.S. Easaw, M.H. Rafia (Penang, Malaysia)
- 1095 Association between Yerba Mate (*Ilex paraguaiensis*) consumption and risk of Parkinson's disease**
E.M. Gatto, C.M. Melcon, V.L. Parisi, L. Bartoloni, T. Arakaki, N. Garreto, J. Bueri, H. Pavon, L. Derosa, C. Gonzalez (Buenos Aires, Argentina)
- 1096 Up-to-date data of prevalence of Parkinson's disease in Ukraine**
Y.O. Trufanov (Lugansk, Ukraine)
- 1097 A case-control study of lithium deficiency in Parkinson's disease**
L.K. Mischley, W.A. Kukull (Kenmore, WA, USA)
- 1098 PREDICT-PD study: Online screening algorithm identifying Parkinson's disease risk**
A.J. Noyce, J.P. Bestwick, L. Silveira-Moriyama, C.H. Hawkes, C. Knowles, J. Hardy, G. Giovannoni, S. Nageshwaran, C. Osborne, A.J. Lees, A. Schrag (London, United Kingdom)
- 1099 Severe adverse reactions after botulinum toxin treatment**
C. Milani, S.L.S. Milani (Ribeirao Preto, Brazil)
- 1100 Environmental pollutants in Ulaanbaatar are risk factors for Parkinson's diseases**
U. Dashdorj, B. Bold (Ulaanbaatar, Mongolia)
- 1101 Use of antihypertensive agents and risk of Parkinson's disease: A meta-analysis of observational studies**
K. Gudala, D. Bansal (Mohali, India)

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- 1081 Review article - Movement disorders in Ethiopia**
D.K. Worku (Addis Ababa, Ethiopia)
- 1082 Increased risk of depression in patients with Parkinson's disease: A nationwide cohort study**
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- 1083 Spectrum and burden of movement disorder conditions in a tertiary movement disorders centre in Singapore – A 10 year trend**
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- 1084 Prevalence of Parkinson's disease in Baskale, Turkey: A population-based study**
H. Durmus, M.A. Gokalp, H.A. Hanagasi (Istanbul, Turkey)



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- 1102 Personality traits in psychogenic non-epileptic seizures (PNES) and psychogenic movement disorder (PMD): Neuroticism versus perfectionism**
V. Ekanayake, S.M. Kranick, K. LaFaver, A. Naz, A.F. Webb, W.C. LaFrance, Jr., V. Voon, M. Hallett (West Lafayette, IN, USA)
- 1103 The clinical features of Parkinson's disease patients with pathogenic and non-pathogenic glucocerebrosidase gene mutations**
T. Oeda, A. Umemura, R. Hayashi, S. Tomita, M. Kohsaka, K. Inoue, H. Fujimura, H. Sugiyama, H. Sawada (Kyoto, Japan)
- 1104 A long-term analysis of aspiration pneumonia prevalence and mortality in patients with Parkinson's disease**
U. Akbar, B. Dham, Y. He, S. Wu, M.S. Okun (Gainesville, FL, USA)
- Genetics**
- 1105 Dystonia, facial dysmorphism, intellectual disability and breast cancer associated with a chromosome 13q34 duplication and overexpression of TDFP1: Case report**
M. Moscovich, M.S. LeDoux, J. Xiao, G.L. Rampon, S.R. Vemula, R. Rodriguez, K.D. Foote, M.S. Okun (Curitiba, Brazil)
- 1106 Neurological outcome in cerebrotendinous xanthomatosis treated with chenodeoxycholic acid: Early versus late diagnosis**
G. Yahalom, R. Tsabari, N. Molshatzki, L. Ephrat, H. Cohen, S. Hassin-Baer (Tel-Hashomer, Israel)
- 1107 Paroxysmal kinesigenic dyskinesia and PRRT2 mutations: Clinico-genetic correlations**
K. Methawasin, E.W.L. Teng, A.R.J. Ng, S.H. Seah, W.L. Au, J.J. Liu, J.N. Foo, Y. Zhao, E.K. Tan, L.C.S. Tan (Nakorn-Nayok, Thailand)
- 1108 Four years' experience of chronic and progressive ataxias program in the Hospital JM Ramos Mejia - Buenos Aires, Argentina**
S.A. Rodríguez-Quiroga, D. González-Morón, T. Arakaki, N.S. Garretto, M.A. Kauffman (Caba, Argentina)
- 1109 Replication of GWAS association for MCCC1/LAMP3 in Parkinson's disease in Han Chinese**
N.N. Li, X.L. Chang, X.Y. Mao, D.M. Zhao, Q. Liao, E.K. Tan, R. Peng (Chengdu, China)
- 1110 Phenotypic spectrum of mutations in GNAL: A novel cause of cranio-cervical dystonia**
K.R. Kumar, K. Lohmann, R. Miyamoto, A. Ferbert, T. Lohnau, M. Kasten, J. Hagenah, N. Brueggemann, J. Graf, A. Muenchau, V.S. Kostic, C.M. Sue, A.R. Domingo, R.L. Rosales, L.V. Lee, Y. Mukai, T. Kawarai, R. Kaji, C. Klein, A. Schmidt (Lübeck, Germany)
- 1111 Analysis of N551K and R1398H LRRK2 variants in an Asian cohort**
A.A. Gopalai, H.H. Li, S.Y. Lim, S.K. Lim, L.P. Tan, Y.B. Chong, Z. Abdul Aziz, N.M. Ibrahim, S.D. Puvarajah, T.T. Lim, Y. Zhao, E.K. Tan, A. Ahmad-Annuar (Kuala Lumpur, Malaysia)
- 1112 PRRT2 mutation screening in patients with paroxysmal kinesigenic dyskinesia from Southwest China**
Y. Chen, W. Song, J. Yang, Z.Z. Zheng, R. Huang, K. Chen, B. Zhao, X. Chen, J.M. Burgunder, H. Shang (Chengdu, China)
- 1113 A specific SEPT14 haplotype is associated with a reduced risk for Parkinson's disease**
A. Orr-Urtreger, L. Rozenkrantz, Z. Gan-Or, M. Gana-Weisz, A. Mirelman, T. Gurevich, A. Bar Shira, N. Giladi (Tel Aviv, Israel)
- 1114 Diagnostic exome sequencing in movement disorders**
E.J. Kamsteeg, C. Gilissen, K. Neveling, R. de Reuver, B. van de Warrenburg, M. Willemsen, S. Vermeer, H. Brunner, J. Veltman, M. Nelen, H. Scheffer (Nijmegen, Netherlands)
- 1115 Withdrawn by Author**
- 1116 Genetic analysis of Parkinson's disease, torsion dystonia and Huntington's disease in Belarus**
O.A. Yacuts, K.A. Mosse, I.V. Pleshko, S.A. Likhachev (Minsk, Belarus)
- 1117 Clinical features of onset in monogenic Parkinson's disease**
A.E. Elia, J. Azzollini, C. Bagella, M. Carecchio, C. Barzaghi, B. Garavaglia, A. Albanese (Milan, Italy)
- 1118 Genetic analysis for C9orf72 hexanucleotide repeat expansion in neurodegenerative disorders in Taiwan**
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- 1119 Interaction between caffeine intake and LRRK2 variant in Parkinson's disease**
S.S.T. Paing, H. Li, Y. Zhao, K.M. Prakash, E.K. Tan (Singapore, Singapore)
- 1120 A role for SRY in healthy and injured dopamine pathway: Implication for male susceptibility to Parkinson's disease**
J. Lee, D. Czech, J. Correia, A. Russ, E. Vilain, V. Harley (Melbourne, Australia)
- 1121 Rare variants in ubiquitin specific peptidase 21 (USP21) are not associated with Parkinson's disease**
J.H. Hong, J.M. Choi, K.H. Kim, M.J. Chae, H.K. Park, S.Y. Kang, H.I. Ma, J. Kim, W.C. Kim, Y.J. Kim (Ynyang, Korea)
- 1122 A novel autosomal recessive torsion dystonia of childhood onset, caused by a mutation in adenylyl cyclase 5 gene**
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- 1123 SPG11 sequencing in worldwide populations of familial and sporadic spastic paraplegia patients reveals frequent mutations and the common association of parkinsonian features**
E. Kara, L. Schottlaender, A. Berardo, R. Reisin, J. Hehir, D. Hughes, R. Paudel, J. Hershenson, Y.T. Liu, E. Preza, P. Lewis, A. Martin, P. Kortlipara, K.P. Bhatia, A. Lees, T. Foltyniec, N. Wood, J. Hardy, H. Houlden (London, United Kingdom)
- 1124 Targeted DNA sequencing for neurodegenerative disorders**
S. Appel-Cresswell, M.J. Farrer (Vancouver, BC, Canada)
- 1125 Mutation screening of the PRRT2 gene in patients with Tourette syndrome in Taiwan**
S.C. Lai, T.H. Yeh, C.L. Huang, H.C. Chang, C.S. Lu (Taoyuan, Taiwan)
- 1126 The tumor suppressor gene WWOX is mutated in autosomal recessive cerebellar ataxia with epilepsy and mental retardation**
M. Mallaret, O. Lagha Boukbiza, N. Drouot, M. Renaud, F.A.C. Klein, M. Anheim, C. Mignot, J.L. Mandel, M.A. Salih, M. Koenig (Strasbourg, France)
- 1127 Association studies of MMP-9 in Parkinson's disease and amyotrophic lateral sclerosis**
L. Yu, X. He, L. Zhang, Z. Liu, Y. Xu (Chengdu, China)
- 1128 Genetic polymorphism of adenosine A2a receptor is associated with the development of Parkinson's disease and of L-dopa-induced hyperkinesia**
J.J. Lin, K.C. Yueh (Nantou, Taiwan)
- 1129 Association of dopamine metabolizing gene polymorphisms in Parkinson's disease - A study from India**
R. Borgohain, K. Nadella, A. Uma, R.M. Kandadai, V.K. Kutala (Hyderabad, India)



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- 1130 Behavioral characteristics of asymptomatic G2019S mutation carriers of the LRRK2 gene**
A. Thaler, A. Mirelman, K. Yasinovski, M. Zalis, A. Shkedy, A. Hilel, K. Marder, S. Bressman, A. Orr-Urtreger, T. Gurevich, N. Giladi (Tel-Aviv, Israel)
- 1131 LRRK2 mutations and Parkinson's disease in the Uruguayan population**
V.E. Raggio, E. Dieguez, A. Lescano, B. Aguiar, R. Aljanati, M. Martinovic, I. Amorín, N. González, A.J. Ojeda, V. Pomar, G. Nogueira, L. Aguerre, G. Montado, G. Etchandi, E. Segredo, A.M. Soler, D. Yearout, H. Huston, R. Buzó, C.P. Zabetian, I.F. Mata (Montevideo, Uruguay)
- 1132 New insights into the genetics of X-linked dystonia-parkinsonism**
A. Domingo, A. Westenberger, R. Rosales, R.D. Jamora, P.M. Pasco, K. Lohmann, L.V. Lee, C. Klein (Lübeck, Germany)
- 1133 VPS35 gene variant Asp620Asn in patients with Parkinson's disease in Serbian population**
M.Z. Jankovic, V.S. Dobricic, N.D. Kresojevic, A.D. Tomic, V.V. Markovic, M.V. Svetel, I.V. Novakovic, V.S. Kostic (Belgrade, Serbia)
- 1134 Prevalence of c.801-2A>G mutation in the DNAJC6 gene in Parkinson's disease from southern Spain**
S. Jesús, P. Gómez-Garre, F. Carrillo, M.T. Cáceres-Redondo, I. Huertas-Fernández, I. Bernal-Bernal, M. Bonilla, M. Carballo, P. Mir (Seville, Spain)
- 1135 Systematic mutational analysis of FBX07 in a Parkinson's disease population from southern Spain**
P. Gómez-Garre, S. Jesús, F. Carrillo, M.T. Cáceres-Redondo, I. Huertas-Fernández, I. Bernal-Bernal, M. Bonilla-Toribio, M. Carballo, P. Mir (Seville, Spain)
- 1136 Mutation analysis for DNAJC6 in patients with early-onset Parkinson's disease**
H. Tomiyama, M. Ando, Y. Li, H. Yoshino, N. Hattori (Tokyo, Japan)
- 1137 PRRT2 gene mutation analysis in Korean familial and sporadic patients with paroxysmal kinesigenic dyskinesia**
J. Youn, Y. Jeong, J.Y. Ahn, J.W. Cho (Seoul, Korea)
- 1138 Clinical and genetic characteristics of first degree relatives of Jewish patients with Parkinson's disease of North African origin**
M. Kestenbaum, T. Gurevich, N. Giladi, K. Yasinovsky, M. Zalis, A. Shkedi, Y. Douieb, M. Gana-Weiss, A. Orr-Urtreger, A. Mirelman (Tel Aviv, Israel)
- 1139 Association of P2X7 receptor gene polymorphisms with sporadic Parkinson's disease in a Han Chinese population**
H. Liu, a. Xie (Qingdao, China)
- 1140 DYT6/THAP1 gene sequencing as a part of standard clinical examination: Comprehensive data for Serbian dystonia cohort**
V.S. Dobricic, M.Z. Jankovic, N.D. Kresojevic, A.D. Tomic, I.N. Petrovic, M.V. Svetel, I.V. Novakovic, V.S. Kostic (Belgrade, Serbia)
- 1141 Analysis of apolipoprotein E genotype in Taiwanese patients with sporadic PD**
C.L. Huang, S.C. Lai, H.C. Chang, T.H. Yeh, C.S. Lu (Taoyuan, Taiwan)
- 1142 Rapid disease progression in adult-onset mitochondrial membrane protein associated neurodegeneration**
O. Dogu, C.E. Krebs, H. Kaleagasi, Z. Demirtas, N. Oksuz, R.H. Walker, C. Paisán-Ruiz (Mersin, Turkey)
- 1143 The human testis-determining factor SRY localizes in midbrain dopamine neurons and regulates multiple components of catecholamine synthesis and metabolism**
D.P. Czech, J. Lee, H. Sim, C.L. Parish, E. Vilain, V.R. Harley (Clayton, Australia)
- 1144 Search for rare-variant risks of Parkinson's disease by sequencing of candidate genes and exome sequencing**
W. Satake, Y. Ando, H. Tomiyama, A. Takeda, K. Hasegawa, M. Yamamoto, M. Murata, N. Hattori, T. Toda (Kobe, Japan)
- 1145 Rare variants in Alzheimer's disease and frontotemporal dementia genes in Parkinson's disease**
E.C. Schulte, A. Fukumori, B. Mollenhauer, H. Hor, R. Perneckzy, A. Kurz, M. Hüll, T. Arzberger, P. Lichtner, G. Eckstein, A. Zimprich, D. Haubenberger, W. Pirker, T. Brücke, B. Bereznoi, M.J. Molnar, O. Lorenzo-Betancor, P. Pastor, A. Peters, C. Gieger, X. Estivill, H.A. Kretschmar, T. Meitinger, C. Trenkwalder, C. Haass, J. Winkelmann (München, Germany)
- 1146 Leucine-rich repeat kinase 2 (LRRK2) is secreted in urinary and CSF exosomes: Implication as a biomarker for Parkinson's disease**
J.Y. Williams, K.B. Fraser, N.N. Sukar, P.J. Webber, J.P. Lima Daher, M.S. Moehle, C.A. Stewart, R.M. Cowell, T. Dokland, T. Ye, D. Chen, T.A. Yacoubian, G.P. Siegal, R.A. Gallemmo, D.J. Moore, D.G. Standaert, J.A. Mobley, A.B. West (Birmingham, AL, USA)
- 1147 Brain-derived neurotrophic factor G196A polymorphism and clinical presentation of Parkinson's disease in Serbian patients**
A. Tomic, M. Svetel, T. Pekmezovic, V. Markovic, G. Djuric, N. Dragasevic, I. Petrovic, V.S. Kostic (Belgrade, Serbia)
- 1148 MicroRNA as modifiers of age of onset of Parkinson's disease**
T. Fixler Mehr, R. Djaldetti, N. Kaplan, O.S. Cohen, R. Inzelberg, G. Yahalom, E. Friedman, S. Hassin-Baer (Ramat-Gan, Israel)
- 1149 Polymorphism in HOMER1 gene is associated with levodopa induced dyskinesia in Parkinson's disease patients**
A.F. Schumacher-Schuh, M.S. Medeiros, V. Altmann, M. Rieck, T.L. Monte, C.R.M. Rieder, M.H. Hutz (Porto Alegre, Brazil)
- 1150 Variants in ANO3 as susceptibility factor in essential tremor?**
F. Hopfner, M. Bungeroth, G. Deuschl, G. Kuhlenbäumer, S.A. Schneider (Kiel, Germany)
- 1151 Clinical correlations with lewy body pathology in LRRK2-related Parkinson's disease**
L. Kalia, A. Lang, L. Hazrati, S. Fujioka, Z. Wszolek, D. Dickson, O. Ross, V. Van Deerlin, J. Trojanowski, H. Hurtig, R. Alcalay, C. Gaig, E. Tolosa, J. Ruiz-Martinez, J. Marti Masso, I. Ferrer, A. Lopez de Munain, S. Goldman, B. Schuele, J. Langston, J. Aasly, M. Giordana, V. Bonifati, A. Puschmann, K. Hasegawa, C. Duyckaerts, A. Brice, A. Maues de Paula, C. Marras (Toronto, ON, Canada)
- 1152 Association between PARK16 and Parkinson's disease in the Han-Chinese population: A meta-analysis**
K.H. Chang, Y.R. Wu, C.M. Chen, Y.C. Chen (Taoyuan, Taiwan)
- 1153 Defective synthesis of complex gangliosides is involved in hereditary spastic paraplegia**
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- 1154 Variable penetrance of the LRRK2-R1441G mutation in a Peruvian family**
M.R. Cornejo-Olivas, L. Torres, P. Mazzetti, C. Cosentino, C.P. Zabetian, I.F. Mata (Lima, Peru)
- 1155 Is GCH1 a risk locus for Parkinson's disease? Evidence from a case report**
N. Mencacci, J. Polke, M. Stamelou, K. Sidle, A. Batla, M. Sweeney, H. Houlden, N. Wood, J. Hardy, K. Bhatia (London, United Kingdom)



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- 1156 Atypical Chédiak-Higashi syndrome with attenuated phenotype: Three adult siblings homozygous for a novel LYST deletion and with neurodegenerative disease**
J.D. Weisfeld-Adams, M. Lakshmi, R.C. Janet, D.R. Francine, S. Arnold, L.D. Fred, I.J. Wendy, C. Michael, C. Catherine (New York, NY, USA)
- 1157 FBX07 variations in Taiwanese Parkinson's disease**
C.M. Chen, I.C. Chen, Y.C. Huang, H.F. Juan, G.J. Lee-Chen, Y.R. Wu (Taipei, Taiwan)
- 1158 Genetic variations of GAK in two Chinese Parkinson's disease populations: A case-control study**
Y.R. Wu, C.M. Chen, C.M. Chen, W.E.J. Tseng, E.K. Tan, Y. Zhao (Taipei, Taiwan)
- 1159 A comprehensive diagnostic test for familial and early onset Parkinson's disease based on next-generation sequencing**
N. Mencacci, A. Pittman, U. Sheerin, G. Charlesworth, D. Hughes, M. Sweeney, N. Wood, H. Houlden, A. Lees, K. Bhatia, T. Foltynie, J. Hardy (London, United Kingdom)
- 1160 APP processing genes and cerebrospinal fluid biomarker levels in Parkinson's disease dementia**
L.M. Bekris, F. Lutz, S. Millard, T.W. Debby, P.R. Elaine, Y.E. Chang, M.J. Thomas, Z. Jing, Z. Cyrus, L.B. James (Seattle, WA, USA)
- 1161 The LRRK2 R1441H mutation and Parkinson's disease**
L. Correia Guedes, M. Quadri, V. Bonifati, J.J. Ferreira (Lisbon, Portugal)
- 1162 DRD3 receptor polymorphism may confer risk for younger onset Parkinson's disease**
A. Hassan, M.S. Okun, D.J. Serie, M.G. Heckman, J.E. Ahlskog, R.J. Uitti, Z. Wszolek, O.A. Ross (Rochester, MN, USA)
- 1163 Association between DRD2 and NMDA GRIN2B genetic polymorphisms in Caucasian Parkinson's disease patients**
A. Hassan, M.S. Okun, D.J. Serie, M.G. Heckman, J.E. Ahlskog, Z. Wszolek, R.J. Uitti, O.A. Ross (Rochester, MN, USA)
- 1164 Comprehensive assessment of genetic sequence variants in the antioxidant 'master regulator' NFE2L2 in idiopathic Parkinson's disease (PD)**
M. Todorovic, J.R.B. Newman, G.D. Mellick (Brisbane, Australia)
- 1165 The effect of genetic background on engrailed1+/- induced loss of midbrain dopaminergic neurons**
Z. Kurowska, U. Nordström, M. Swanberg (Lund, Sweden)
- 1166 Clinical phenotype of Parkinson's disease: Impact of microtubule-associated protein Tau**
V. Montemurro, E. Di Battista, C. Purcaro, R. Scatozza, P. Esterina, G. Meco (Roma, Italy)
- 1167 Withdrawn by Author**
- 1168 A novel heterozygous mutation in ATP synthase (electron transport chain complex V) subunit c gene ATP5G3 causes autosomal dominant dystonia and spastic paraplegia**
D.L. Gilbert, N.D. Leslie, R.B. Hufnagel, D.E. Neilson (Cincinnati, OH, USA)
- 1169 Using next-generation sequencing as a diagnostic tool in rare neurological Mendelian disorders**
H. Jiang, Z. Chen, J. Wang, B. Tang, Z. Sun, Y. Shi, L. Shen, Z. Hu (Changsha, China)
- 1170 SNCA variants do not predict motor progression in Parkinson's disease**
M. Davis, J. Leverenz, J. Trojanowski, D. Weintraub, H. Hurtig, R. Goldman Gross, A. Chen-Plotkin, V. Van Deerlin, J. Quinn, K. Chung, D. Yearout, T. Hall, K. Edwards, T. Montine, C. Zabetian (Seattle, WA, USA)
- 1171 Parkinson's disease LRRK2 gene mutations in the central region of Portugal**
F. Moreira, A. Morgadinho, R. Almeida, A. Gonçalves, C. Januário (Coimbra, Portugal)
- 1172 Gene silencing in Friedreich ataxia is caused by repressive epigenetic changes that extend upstream of the expanded GAA triplet-repeat in intron 1 of the FXN gene**
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- 1173 Association study between SNP rs150689919 in DNA demethylation gene, TET1, with Parkinson's disease in the Chinese Han population**
L. Shen, X. Liao, Y. Luo, J. Guo, B. Tang (Changsha, China)

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- 1174 Parkinson's disease in history**
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- 1175 Handwriting and micrographia in Parkinson's disease**
A. Letanneux, J.L. Velay, F. Viallet, S. Pinto (Aix-en-Provence cedex 1, France)
- 1176 The development of botulinum toxin as a therapeutic tool**
D.E. Riley, E.H. Magoon (Cleveland, OH, USA)
- 1177 Renaissance dystonia – Dystonia in the lights from the north exhibition of German renaissance drawings and prints in Baron Edmond de Rothschild's collection from the Musée du Louvre**
F.M.B. Germiniani, F.P. Zorzetto, A. Moro, R. Puppi, F. Tensini, N. Becker, R. Nickel, H.A.G. Teive (Curitiba, Brazil)
- 1178 Whose name is it anyway? The prevalence of the apostrophe in selected eponymous neurodegenerative diseases, 1960-2012**
M.R. MacAskill, T.J. Anderson (Christchurch, New Zealand)

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- 1179 Metabolic impairments of brain in patients with probable dementia of lewy bodies**
Y. Yang, S. Kim (Seoul, Korea)
- 1180 Omi-mediated detoxification of α -synuclein-induced neurotoxicity in a drosophila model of Parkinson's disease**
M.M. Rahman, S. Akhter, M.S. Islam, H.J. Kim, S.T. Hong (Jeonju-si, Korea)
- 1181 Clinical features of dementia with lewy bodies in 35 Chinese patients**
Z. Wang, Q. Wang, D. Han (Beijing, China)
- 1182 α -Synuclein pathology is related with postoperative delirium in patients undergoing gastrectomy**
M.K. Sunwoo, J.Y. Hong, H.J. Park, S.H. Kim, P.H. Lee (Seoul, Korea)
- 1183 Mammalian HtrA2 functions to protect α -synuclein-induced prion protein deposition in mice**
S. Akhter, M.M. Rahman, M.S. Islam, M.A. Razzak, H.J. Kim, S.T. Hong (Jeonju, Korea)



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- 1184 De novo presenilin mutation at P.Gly266 Ser PSEN 1 causes at one 43-year old patient, beside dementia, extrapyramidal motor symptoms**
I. Velentzas, G. Nasioulas, P. Afentouli (Athens, Greece)
- 1185 Sequential clock drawings in sporadic Creutzfeldt-Jakob disease**
V.F.M.L. Ramos, D.L. Murman (Bethesda, MD, USA)
- 1186 A case of neurosyphilis presenting with tongue tremor and dementia**
H.A.G. Teive, A. Moro, R.P. Munhoz (Curitiba, Brazil)
- 1187 Clinical features and drug response of patients with early stage dementia with lewy bodies**
R. Ohtomo, K. Fujii, S. Tsuji, A. Iwata (Tokyo, Japan)

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- 1188 Does idiopathic propriospinal myoclonus exist ?**
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- 1189 Trembling myoclonus: A peculiar type of myoclonus in the elderly**
T. Doden, H. Sato, T. Hashimoto (Matsumoto, Japan)
- 1190 Spectrum of hyperkinetic movements in sporadic Creutzfeldt-Jakob disease (sCJD): A literature review**
M. Molina, R. Fekete (Valhalla, NY, USA)
- 1191 The functional MRI (fMRI) manifestation of stimulus sensitive myoclonus in corticobasal degeneration**
C.H. Tsai, J.M. Chen, M.K. Lu, J.R. Duann (Taichung, Taiwan)
- 1192 Spinal segmental myoclonus in multiple sclerosis: A case report**
I.F. Khafizova, Z.A. Zalyalova, A.R. Khakimova, E.A. Baranova, M.S. Gafurov (Kazan, Russia)
- 1193 The correlation between spinal cord lesions and propriospinal myoclonus**
E. Marcello, E.J. Mark, C. Olga, C. David, B.P. Kailash, C. Carla (Naples, Italy)
- 1194 Unusual case of jerking stiff person syndrome**
N. Chaudhary, S. Jaiswal, J.M.K. Murthy (Hyderabad, India)
- 1195 Clinical and neurophysiological findings in Post hypoxic myoclonus**
M. Beudel, J.W.J. Elting, M.A.J. Tijssen (Groningen, Netherlands)

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- 1196 Meat, nicotinamide and longevity: Is Parkinson's disease the trade-off?**
A. Williams, L. Hill, S. Patel (Birmingham, United Kingdom)
- 1197 Rise in incidence of Parkinson's disease in the 19th century UK correlates with increased meat intake**
A. Williams, L. Hill, S. Patel (Birmingham, United Kingdom)
- 1198 Incobotulinumtoxin A affects pain perception in healthy subjects**
T. Vogt, S. Mbialeu, C. Geber, F. Birklein (Mainz, Germany)
- 1199 Neuroprotective effect of curcumin with a fixator of absorption against both aluminium neurotoxicity and Alzheimer's disease (experimental studies in mice)**
N. Djebli (Mostaganem, Algeria)
- 1200 New autoimmune encephalopathy with myoclonus and dystonia responsive to delayed treatment**
M. Marina, L. Lydia, G. Francesc, M. Antonio, L.L. Juan Jose (Madrid, Spain)

- 1201 Use of the levodopa sparing strategy in young onset Parkinson's disease**
A.Q. Rana, Y. Mujawaz, M.A. Rana (Toronto, ON, Canada)
- 1202 Long-term efficacy of botulinum toxin in patients with hemifacial spasm**
T. Demir, S. Yildirim, M. Demirkiran (Adana, Turkey)
- 1203 Neuroprotective abilities of DJ-1 based peptide in models of Parkinson's disease**
N. Lev, Y. Barhum, T. Ben-Zur, D. Offen, E. Melamed (Ramat Gan, Israel)
- 1204 Efficacy and safety of rotigotine 24 hour transdermal patch in the treatment of early Parkinson's disease: A meta-analysis**
G.M.I. Ramiro, N.L. Fabiania, R.D.G. Jamora (Manila, Philippines)
- 1205 Botulinum toxin as a new treatment modality for jerky functional movement disorders: An ongoing randomized controlled trial**
Y.E.M. Dreissen, D.C. Cath, J.M. Dijk, E. Zoons, J.H.T.M. Koelman, M.A.J. Tijssen (Amsterdam, Netherlands)
- 1206 Botulinum toxin type A for the treatment of cephalic cutaneous allodynia in chronic migraine: A randomized, double-blinded, placebo-controlled pilot trial**
L. Monteiro, L. Hollanda, A. Melo (Salvador, Brazil)

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- 1207 Caregivers' burden in patients of multiple system atrophy (MSA)**
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- 1208 Burden of care among caregivers in Indian patients with Parkinson's disease**
K.B. Bhattacharyya, P. Basu, A. Mishra, D. Sanyal, S.K. Das (Kolkata, India)
- 1209 Evaluation of the motivation of family doctors in providing care to patients with Parkinson's disease and movement disorders**
O.M. Korzh, S.V. Krasnokutskiy, E.V. Lavrova (Kharkov, Ukraine)
- 1210 Outcomes of a pilot 5 day physiotherapy programme for functional movement disorders (FMDs)**
G. Nielsen, M.J. Edwards (London, United Kingdom)
- 1211 Outcome after inpatient rehabilitation for patients with functional movement disorders**
A. Batla, K.P. Bhatia, L. Fisher, E.M. Joyce, G. Price, M.J. Edwards (London, United Kingdom)
- 1212 Determinants of health-related quality of life in people with Parkinson's disease living in Australia**
S.E. Soh, J.L. McGinley, J.J. Watts, A.T. Murphy, R. Iansek, H.B. Menz, M.E. Morris (Melbourne, Australia)
- 1213 A study to compare the effects of motor and non-motor symptoms on the health related quality of life of patients with Parkinson's disease**
G.V. Veena, M. Agarwal, M. Behari (New Delhi, India)
- 1214 Quality of life and its determinants in a cohort of patients with Parkinson's disease from a developing country in Asia**
P.N. Weeratunga, N. Perera, M. Caldera, K. Gooneratne, R. Gamage (Colombo, Sri Lanka)
- 1215 Reluctance to start medication in Parkinson's disease from the patient perspective: Results from an international observational study**
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- 1216 Real-time gait analysis algorithm to monitor patient activity for Parkinson's disease**
I.U.L. Haq, J. Lundberg (Ronneby, Sweden)

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- 1218 The long-term safety and efficacy of thalamic deep brain stimulation in essential tremor**
J.F. Baizabal-Carvalho, M. Kagnoff, J. Jimenez-Shahed, R. Fekete, J. Jankovic (Houston, TX, USA)

- 1219 Comparison of double monopolar and interleaving stimulation modes in the treatment of primary generalized and segmental dystonia**
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- 1220 Withdrawn by Author**

- 1221 Effects of STN DBS for dystonia on dual-task cognitive function**
K.A. Mills, L.C. Markun, M. San Luciano, A. Thota, C.A. Racine, P.A. Starr, J.L. Alberts, J.L. Ostrem (San Francisco, CA, USA)

- 1222 Interleaving deep brain stimulation reduces stimulation induced dysarthria in patients with essential tremor**
M.T. Barbe, T. Dembek, J. Becker, J. Raethjen, M. Hartinger, I.G. Meister, M. Runge, M. Maarouf, G.R. Fink, L. Timmermann (Cologne, Germany)

- 1223 Posterior subthalamic area deep brain stimulation in a case with fragile X-Associated tremor/ataxia syndrome**
G. Oyama, A. Umamura, N. Nishikawa, A. Nakajima, T. Jo, M. Nakajima, H. Ishii, Y. Shimo, H. Arai, N. Hattori (Bunkyo-ku, Japan)

- 1224 Effect of spinal cord stimulation on gait with patients with PSP**
T. Ichikawa, H. Oshima, Y. Fumimura, Y. Nishida (Ageo City, Japan)

- 1225 Influence of electrode position and outcome following deep brain stimulation surgery in the management of childhood primary and secondary dystonias**
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- 1226 Status dystonicus due to internal pulse generator depletion in a patient with primary generalized dystonia**
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- 1227 Right hemichorea treated successfully by surgical removal of the left putaminal cavernous angioma**
M. Sobstyl, M. Zabek, M. Jakucinski (Warsaw, Poland)

- 1228 A new procedure of selective denervation and myotomy for laterocollis cervical dystonia: Results in 66 cases**
J. Liang, S. Ji, A. Ma (Wuhan, China)

- 1229 Long-term follow-up study for patients with primary generalized dystonia treated by bilateral pallidal stimulation**
M. Sobstyl, M. Zabek, Z. Mossakowski (Warsaw, Poland)

- 1230 Combined pallidal and subthalamic deep brain stimulation in dystonia- Report of two cases**
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- 1231 Unilateral thalamic deep brain stimulation improves spasmodic dysphonia**
N. Patel, A. Richter, D. Donovan, J. Jimenez-Shahed (Houston, TX, USA)

- 1232 Habituation and rebound to thalamic DBS in long-term management of tremor associated with demyelinating sensorimotor peripheral neuropathy**
N. Patel, W. Ondo, J. Jimenez-Shahed (Houston, TX, USA)

- 1233 Results of interventional MRI (iMRI)-guided deep brain stimulator placement in children**
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- 1234 Long-term follow-up of GPi deep brain stimulation in generalized dystonia: Primary dystonia compared to cerebral palsy**
L.M. Romito, G. Zorzi, M.L. Ciceri, C.E. Marras, A. Franzini, N. Nardocci, A. Albanese (Milano, Italy)

- 1235 Long-term follow up of chronic spinal cord stimulation in medically intractable orthostatic tremor**
T. Sauer, C. Blahak, G. Luetjens, A. Saryyeva, H. Baezner, H.H. Capelle, J.C. Woehrle, M.G. Hennerici, J.K. Krauss (Mannheim, Germany)

- 1236 Deep brain stimulation for DYT6 dystonia: A case report**
S. Miri, M. Parvaresh, G.A. Shahidi, M. Rohani, S. Karkheiran, A. Sabet (Tehran, Iran)

- 1237 Pallidal deep brain stimulation setting in DYT1 positive and DYT1 negative patients with primary generalized dystonia**
M. Rohani, S. Miri, G.A. Shahidi, M. Parvaresh, A. Sabet (Tehran, Iran)

- 1238 A survey of the clinical state and programming patterns of movement disorder patients with impending deep brain stimulation battery power failure**
K.M.K. Wilson, R. Mehanna, S.E. Cooper, H.H. Fernandez, M.T. Gostkowski, J. Rudolph, A. Ahmed, I. Itin, A.G. Machado (Cleveland, OH, USA)

- 1239 Complications of IPG replacement in deep brain stimulation**
A. Fytagoridis, A. Fredricks, P. Blomstedt (Stockholm, Sweden)

- 1240 Efficacy of DBS GPi in generalized dystonia with basal ganglia calcification**
A. Gamaleya, A. Tomskiy, A. Dekopov, V. Shabalov (Moscow, Russia)

- 1241 Is it possible to remove subcortically located space occupying lesion in the sensory motor strip with motor function improvement?**
W.E. Eisner, F. Sohm, M. Mulino, T. Fiegele (Innsbruck, Austria)

- 1242 Deep brain stimulation of the caudal zona incerta and the posterior subthalamic area in essential tremor, is there an optimal area for stimulation?**
A. Fytagoridis, M. Åström, P. Blomstedt (Stockholm, Sweden)

- 1243 Deep brain stimulation in a case of hemichorea/athetosis with dystonia associated with a developmental venous anomaly and microbleeding in the subthalamic nucleus area**
T. Xie, I. Awad, U. Kang, P. Warnke (Chicago, IL, USA)

- 1244 Visualizing pallidal DBS for dystonia and Parkinson's disease**
T.C. Cheung, A.N. Mamelak, M. Tagliati (Los Angeles, CA, USA)

- 1245 Causes of therapeutic failure of pallidal deep brain stimulation in primary dystonia**
K.A.M. Pauls, J.K. Krauss, C.E. Kämpfer, C. Schrader, M. Südmeyer, N. Allert, R. Benecke, C. Blahak, J.K. Boller, W. Fogel, F. El Majdoub, J. Kessler, J. Kuhn, J. Voges, M. Wittstock, A.A. Kühn, E. Moro, J. Volkmann, K.P. Bhatia, M. Maarouf, L. Timmermann (Köln, Germany)

- 1246 GPi-deep brain stimulation can be useful for both refractory tics and OCD in severe Tourette syndrome**
C. Srikanth-Mysore, A. Dale, A.A. Patil, B. Roeder, D. Torres-Rusotto (Omaha, USA)



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- 1247 Gammaknife thalamotomy for intractable tremors: Clinical outcome and correlations with neuroimaging features**
T. Witjas, R. Carron, J.P. Azulay, J. Regis (Marseille, France)

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- 1248 Prospective analysis of STN DBS in Parkinson's disease: Motor and non-motor symptoms evolution link to electrodes localization**
I. de Chazeron, B. Pereira, I. Chereau-Boudet, F. Durif, P.M. Llorca (Clermont-Ferrand, France)
- 1249 Gender differences do not influence selection and outcome of DBS for Parkinson's disease**
S.B. Chandran, S.N. Krishnan, S. Gangadhara, A. Kishore, S. Sarma (Coimbatore, India)
- 1250 Withdrawn by Author**
- 1251 Deep brain stimulation programming in Parkinson's disease using functional motor symptom response tuning maps**
T.O. Mera, J. Vitek, J.P. Giuffrida (Cleveland, USA)
- 1252 Steering deep brain stimulation: An exploratory study with a new 32-contact lead**
M.F. Contarino, L.J. Bour, R.M.A. de Bie, P. van den Munckhof, P.R. Schuurman (Amsterdam, Netherlands)
- 1253 A deep brain stimulation programming template for electronic medical records**
M.H. Pourfar, A.Y. Mogilner, C.E. Snapp (New York, NY, USA)
- 1254 Effect of dorsal and ventral subthalamic nucleus deep brain stimulation on actual and perceived sense of postural balance**
T.R. Larsh, A. Bhattacharya, A.P. Duker, A. Mani, C. Cox, M. Gartner, F.J. Revilla (Cincinnati, OH, USA)
- 1255 Effect of disease duration on preoperative levodopa responsiveness as a criterion for subthalamic nucleus deep brain stimulation in Parkinson's disease patients**
D. Aygun, E. Kocabicak, M.K. Onar, K. Akpinar, H. Güz, Ö. Böke, M. Kurt (Samsun, Turkey)
- 1256 Infections following deep brain stimulation – A proposed classification system**
R. Cook, L. Jones, G. Fracchia, N. Anderson, J. Miu, L. Meagher, P. Silburn, P. Silberstein (Sydney, Australia)
- 1257 Simultaneous DBS of the STN and GPI: Case reports**
R. Cook, L. Jones, G. Fracchia, N. Anderson, J. Miu, L. Meagher, P. Silburn, P. Silberstein (Sydney, Australia)
- 1258 Complications of subthalamic nucleus deep brain stimulation: An Australian experience**
R. Cook, L. Jones, G. Fracchia, N. Anderson, J. Miu, L. Meagher, P. Silburn, P. Silberstein (Sydney, Australia)
- 1259 Multisystemic atrophy Parkinson and deep brain stimulation on subthalamic nucleus**
R. Ribacoba, E. Suárez, F.J. Seijo (Oviedo, Spain)
- 1260 Simultaneous targeting of STN and GPI can be useful for DBS therapy in advanced Parkinson's disease**
P. Hedera, M.K. Cooper, F.T. Phibbs, P.D. Charles, P.E. Konrad, J.S. Neimat, T.L. Davis (Nashville, TN, USA)
- 1261 Five-year outcome of postural instability and gait disturbance (PIGD) after bilateral subthalamic nucleus stimulation in Parkinson's disease**
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- 1262 Model-based deep brain stimulation programming for Parkinson's disease: The GUIDE pilot study**
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- 1263 Successful long-term bilateral subthalamic nucleus deep brain stimulation in VPS35 Parkinson's disease**
V. Fleury, C. Wider, J. Horvath, A. Zacharia, J. Bally, P. Pollak, C. Pollo, F.J.G. Vingerhoets, P.R. Burkhard (Geneva, Switzerland)
- 1264 A new DBS lead: Simultaneous 32-contact local field potential recording in the Parkinsonian STN**
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- 1265 Deep brain stimulation of the subthalamic nucleus in advanced Parkinson's disease: 5 year follow-up at a Portuguese centre**
A. Monteiro, C. Andrade, A. Oliveira, C. Chamadoira, P. Linhares, J. Lima, C. Sousa, R. Fonseca, C. Silveira, M. Basto, C. Reis, J. Massano, C. Garrett, R. Vaz, M.J. Rosas (Porto, Portugal)
- 1266 Stimulation of electrode contacts within zona incerta directly blocks levodopa-induced dyskinesias in PD patients**
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- 1267 Effect of 80Hz STN-DBS on gait disorders (including FOG) in Parkinson's disease**
L. Nuth, I. Isaias, A. Marzegan, J. Volkmann, F. Steigerwald (Würzburg, Germany)
- 1268 Different combinations of subthalamic nucleus (STN) and pedunculo-pontine nucleus (PPN) deep brain stimulation (DBS) lead to variable effects in saccades and antisaccades in advanced Parkinson's disease (PD)**
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- 1269 The impact of age at surgery on long term outcome of bilateral STN -DBS**
A. Shalash, A. Alexoudi, K. Knudsen, J. Volkmann, M. Mehdorn, G. Deuschl (Cairo, Egypt)
- 1270 Long term outcome of STN-DBS for "not recommended" parkinsonian patients**
K. Kimura, H. Kishida, M. Shimamura, F. Tanaka (Yokohama, Japan)
- 1271 Differential effects of deep brain stimulation in the subthalamic nucleus (DBS-STN) on the motor performance in Parkinson's disease (PD) patients**
A.N. Piano, L. Puay Ngoh, B. David Prakash, I.S.H. Seah, T.C.S. Louis, W.L. Au (Singapore, Singapore)
- 1272 A systematic review of studies on anatomical position of electrode contacts used for chronic subthalamic stimulation in Parkinson's disease**
F. Caire, D. Ranoux, D. Guehl, P. Burbaud, E. Cuny (Limoges, France)
- 1273 Effective use of microelectrode recording for the implantation of deep brain electrodes into the nucleus subthalamicus in advanced Parkinson's disease**
S. Paschen, R. Anwar, P. Kuravi, D. Falk, G. Deuschl, M. Muthuraman, J. Raethjen (Kiel, Germany)
- 1274 Influence of speech task and utterance length on measurement of pitch variability in the speech of Parkinson's disease patients after deep brain stimulation**
J. van Doorn, F. Karlsson (Umeå, Sweden)



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- 1275 Stimulation-related side effects in ten patients with Parkinson's disease treated by subthalamic deep brain stimulation (DBS)**
M.K. Onar, D. Aygun, E. Kocabicak, H. Guz, C.K. Akpinar, O. Boke, M. Kurt (Samsun, Turkey)
- 1276 Dopamine dysregulation syndrome after deep brain stimulation (DBS): A case report**
M.K. Onar, D. Aygun, E. Kocabicak, O. Boke, H. Guz, M. Kurt (Samsun, Turkey)
- 1277 Severe post operative edema following DBS**
I. Asher, T. Norregaard (Columbia, MO, USA)
- 1278 The effect of subthalamic DBS on olfactory function in Parkinson's disease**
M. Fabbri, L.C. Guedes, M. Coelho, D. Abreu, D. Simao, M.R. Rosa, J.J. Ferreira (Lisbon, Portugal)
- 1279 Deep brain stimulation for movement disorders: Our last year experience**
V. Vuletic, D. Chudy, A. Havelka Mestrovic (Zagreb, Croatia)
- 1280 Long-term outcomes from the VA/NIH cooperative study on deep brain stimulation for Parkinson's disease**
W. Marks, Jr., P. Luo, E. Lanier, U. Patel, K. Carlson, J. Rothlind, N. Galifianakis, A. Sarwar, E. Lai, J. Ostrem, J. Duda, J. Bronstein, K. Holloway, M. Brodsky, K. Chung, S. Horn, A. Snodgrass, C. Harris, C. Moy, D. Reda, F. Weaver, M. Stern, K. Follett (San Francisco, CA, USA)
- 1281 Increased therapeutic window with shorter pulse widths (<60µs) of deep brain stimulation in Parkinson's disease**
F. Steigerwald, R. Reese, C. Matthies, J. Volkmann (Würzburg, Germany)
- 1282 Subthalamic deep brain stimulation versus best medical therapy for L-dopa responsive pain in Parkinson's disease**
O. Sürücü, H. Baumann-Vogel, M. Uhl, L.L. Imbach, C.R. Baumann (Zurich, Switzerland)
- 1283 A case of delayed intracranial hemorrhage in Parkinson's disease patient after deep brain stimulation**
S.J. Kim, E.J. Chung, S.L. Kim, M.S. Kim (Busan, Korea)
- 1284 Temporarily faster decline in global cognitive function after bilateral STN DBS in Parkinson's disease**
H.J. Kim, B.S. Jeon, H. Park, J.Y. Kim, H.J. Yang (Seoul, Korea)
- 1285 Subthalamic nucleus deep brain stimulation effects on cardiovascular dysfunction in Parkinson's disease**
A.T. Krygowska-Wajs, A. Furgala, W. Pietraszko, A.B. Gorecka, J. Polak, M.M. Bukowczan, P.J. Thor, M. Moskala (Cracow, Poland)
- 1286 Effects of bilateral subthalamic deep brain stimulation on gastric myoelectric activity in Parkinson's disease**
A.T. Krygowska-Wajs, W. Pietraszko, A. Furgala, A.B. Gorecka, J. Polak, M.M. Bukowczan, P.J. Thor, M. Moskala (Cracow, Poland)
- 1287 Does intra-operative micro-stimulation predict post-operative side effects of subthalamic deep brain stimulation (STN DBS)?**
R. Mehanna, H. Fernandez, A. Machado, S. Cooper (Cleveland Heights, OH, USA)
- 1288 Parkinson study group survey of impulsive and compulsive disorders in Parkinson's disease pre and post deep brain stimulation**
N. Hack, A. Thompson-Avila, E. Moro, M. York, K. Nestor, S. Fayad, H. Ward, M. Okun (Gainesville, FL, USA)
- 1289 Greater pulse generator longevity is associated with bipolar versus monopolar deep brain stimulation for movement disorders**
L. Almeida, P. Rawal, B.L. Smelser, H. Huang, B.L. Guthrie, H.C. Walker (Birmingham, AL, USA)
- 1290 Development of a speech assessment tool (SIV) for use by health professionals who work with DBS patients**
J. van Doorn, A. Ahlinder, J. Labba (Umeå, Sweden)
- 1291 Optimized outpatient information increases deep brain stimulation acceptance rate**
M. Südmeyer, L. Wojtecki, H. Krause, G. Deuschl, A. Schnitzler, B. Möller (Düsseldorf, Germany)
- 1292 Neuroleptic-like malignant syndrome following battery depletion in a patient with deep brain stimulation for secondary parkinsonism**
T. Sauer, M. Wolf, H.H. Capelle, H. Baezner, M.G. Hennerici, J.K. Krauss, C. Blahak (Mannheim, Germany)
- 1293 Pallidotomy as a treatment for Parkinson's disease patients: Is it obsolete?**
O. Jitkriksadaku, R. Bhidayasiri (Bangkok, Thailand)
- 1294 Temporal dynamics of post-operative impedance at the tissue-electrode interface in deep brain stimulation patients**
P. Malone, T. Wu, P. Ghosh, B. McElroy, K. Zaghloul, M. Hallett, T. Patterson, Z. Levine, C. Lungu (Bethesda, MD, USA)
- 1295 Acute lower urinary tract dysfunction after bilateral STN deep brain stimulation surgery for PD**
R. Salazar Montero, T.C. Chai, P.S. Fishman, H. Eisenberg, S.G. Reich (Baltimore, MD, USA)
- 1296 Subthalamic stimulation for Parkinson's disease regularizes the timing of peripheral motor unit discharges during a simple voluntary movement**
H.C. Walker, P. Lee, C.L. Gonzalez, H.L. Huang (Birmingham, AL, USA)
- 1297 Localisation of the subthalamic nucleus in Parkinson's disease with neural beta and gamma activity of local field potentials**
R. Verhagen, D.G.M. Zwartjes, T. Heida, M.F. Contarino, R.M.A. de Bie, P. van den Munckhof, P.R. Schuurman, H.C.F. Martens, P.H. Veltink, L.J. Bour (Amsterdam, Netherlands)
- 1298 Simultaneous bilateral pedunculopontine nucleus (PPN) and subthalamic nucleus (STN)-deep brain stimulation (DBS) in advanced Parkinson's disease (PD)**
M.J. Naushahi, N. Yousif, N. Pavese, P.G. Bain, A.M. Bronstein, D. Nandi (Cambridge, United Kingdom)
- 1299 Health economics and surgical treatment for Parkinson's disease in a world perspective**
G. Schechtmann, V.A. Jourdain (Stockholm, Sweden)
- 1300 Effects of subthalamic nucleus (STN) and pedunculopontine nucleus (PPN)-deep brain stimulation (DBS) on saccades in advanced Parkinson's disease (PD)**
M.J. Naushahi, A.N. Khan, Q. Arshad, P.Y. Lee, S. Khalid, N. Yousif, N. Pavese, P.G. Bain, A.M. Bronstein, D. Nandi (Cambridge, United Kingdom)
- 1301 Effect of pedunculopontine nucleus stimulation at low frequency on gait and balance disorders in advanced Parkinson's disease**
M.L. Welter, A. Demain, C. Ewencyk, A. El Helou, B. Lau, C. François, C. Karachi, D. Grabli (Paris, France)



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- 1302 A three-year follow-up study of STN DBS in Parkinson's disease from Southern China**
X. Fu, L. Chen, J. Liu, W. Xian, Y. Liu, Z. Pei, J. Zeng, J. Li, Z. Liu (Guangzhou, China)
- 1303 The control of automatic responses in Parkinson's disease and its change after treatment**
M. Dec, M. Rudzinska, M. Tutaj, A. Szczudlik (Krakow, Poland)
- 1304 Sensory modulation by deep brain stimulation and its relation to gait function in Parkinson's disease**
D. Nandi, H. Bhatt, N. Yousif, P.G. Bain, B.M. Seemungal (London, United Kingdom)
- 1305 Does dopa-responsive axial impairment in Parkinson's disease predict a poor outcome of subthalamic nucleus deep brain stimulation?**
A. Eusebio, T. Witjas, F. Fluchère, J. Mancini, R. Carron, J. Régis, J.P. Azulay (Marseille, France)
- 1306 Deep brain stimulation (DBS) for movement disorders in 94 patients at a single center: Incidence of surgical complications and subjective outcomes**
P. Vittal, N. Mbabuike, G.S. Lea, R.D. Smith (New Orleans, LA, USA)
- 1307 Effects of deep brain stimulation on gait and balance in Parkinson's disease: A quantitative assessment**
A. Wagle Shukla, C. McLeod, M. Defranco, C. Hass, M. Okun (Gainesville, FL, USA)
- 1308 Factors associated with prolonged length of stay after deep brain stimulation**
J.L. Stroh, C.M. Tolleson, F.T. Phibbs (Nashville, TN, USA)
- 1309 Intraoperative MRI for deep brain stimulation electrode positioning in Parkinson's disease**
C. Sidiropoulos, P.A. LeWitt, D. Taylor, P. Kaminski, L. Scarpace, J. Gorham, J. Schwab (West Bloomfield, MI, USA)
- 1310 Pain in patients with Parkinson's disease after STN DBS: A prospective study**
R.G. Cury, M.G. Guilardi, C.P. Souza, A.R. Paiva, R. Galhardoni, F. Fonoff, M.A. Marcolin, M.L. Myczkowski, D. Arnaut, E.T. Fonoff, E.R. Barbosa, M.J. Teixeira, D.C. Andrade (São Paulo, Brazil)
- 1311 Motion capture method in the assessment of resting tremor in patients with Parkinson's disease treated with deep brain stimulation (DBS)**
M. Boczarska-Jedynak, S.J. Kwiek, R. Sordyl, K. Kubicki, M. Humeniuk, L. Przeklasa, M. Stawarz, A. Polanski, K. Wojciechowski, M. Arkuszewski, P. Bazowski, G. Opala (Katowice, Poland)
- 1312 Carotid cavernous sinus fistula after deep brain stimulation surgery in a patient with Parkinson's disease**
Y.F. Chen, W.F. Chen, F.Y. Shih, T.K. Lin, C.S. Su, Y.Y. Chang (Kaohsiung, Taiwan)
- 1313 Identification of blood vessels with micro doppler ultrasound sonography in stereotactic functional neurosurgery via microelectrode guide tubes—A prototype of high value!**
W.E. Eisner (Innsbruck, Austria)
- 1314 Derivation of dopaminergic neurons from human embryonic stem cells and IPS cells in animal-free conditions to use them in a treatment of Parkinson's disease**
D. Lukovic, V. Moreno Manzano, S.S. Bhattacharya, S. Erceg (Seville, Spain)
- 1315 Subthalamic (STN) deep brain stimulation (DBS) induced ipsilateral facial hyperhidrosis without mydriasis**
F.C. Chang, R.L. Alterman, B.H. Kopell, C. Cho (New York, NY, USA)
- 1316 Review of published outcomes of subthalamic nucleus deep brain stimulation (DBS) in Parkinson's disease supports hypothesis of disease-modifying effect of DBS**
T. Ragole, A. Michas-Martin, C. Barbee, L. Onofri, O. Klepitskaya (Aurora, CO, USA)
- 1317 Subthalamic vs. pallidal DBS for Parkinson's disease with axial dystonia**
A. Gamaleya, A. Tomskiy, A. Dekopov, V. Shabalov (Moscow, Russia)
- 1318 Practice change in DBS target for Parkinson's disease 2010-2012: Influence of the VA/NIH cooperative study #468**
M. San Luciano, N. Galifianakis, C. Racine, L. Markun, P. Starr, P. Larson, R. Taylor, W. Marks, Jr., M. Katz, K. Mills, M. Volz, J. Ostrem (San Francisco, USA)
- 1319 Pain thresholds modification after subthalamic nucleus stimulation in Parkinson's disease**
A. Marques, O. Chassin, D. Morand, B. Debilly, P. Derost, M. Ulla, F. Durif (Clermont-Ferrand, France)
- 1320 Improvement in acquired stuttering following bilateral STN DBS for Parkinson's disease**
J.Y. Fang, K.E. Bradley, E.M. Present (Nashville, TN, USA)
- 1321 Is the presence of pneumocephalus with DBS associated with a prolonged length of stay?**
F.T. Phibbs, C. Tolleson, J.L. Stroh, T.L. Davis (Nashville, TN, USA)
- 1322 Kinematic analysis of the effect of deep brain stimulation on postural instability in Parkinson's disease**
F. Di Biasio, R.A. McGovern, J.C. Cortes, L.M. Winfield, B. Ford, G.M. McKhann, P. Mazzoni (New York, NY, USA)



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